



# SCIENCE BYTES

MARCH 16, 2009 VOLUME 28

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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## 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

## "100 Hours of Astronomy" Event

The "100 Hours of Astronomy" is a four-day event designed to bring astronomy to the public around the world during the period April 2-5, 2009.

The Astrophysics Science Division at NASA's Goddard Space Flight Center in Greenbelt, Md., is coordinating a series of events as part of the "100 Hours of Astronomy" effort to bring astronomy down to earth in the D.C. metropolitan area. Events will include webcasts, tours, educator showcases, rocket launches and so much more!

For more information including a list of events, visit <http://universe.nasa.gov/100hours/>.

For more information about year-round education and outreach programs offered by the Astrophysics Science Division, visit <http://astrophysics.gsfc.nasa.gov/outreach/>.

The International Year of Astronomy 2009 is a global celebration of astronomy and its contributions to society and culture, highlighted by the 400th anniversary of the first use of an astronomical telescope by Galileo Galilei. The aim of IYA is to stimulate worldwide interest, especially among young people, in astronomy and science under the central theme "The Universe, Yours to Discover."

For additional information about the International Year of Astronomy, visit <http://astronomy2009.nasa.gov/>.

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## Anchorage TREErific Meetings - Spring Events

### TREE ANATOMY 101

Wednesday, March 25, 545 - 800p

Senior Center 1300 East 19<sup>th</sup>

Hear Botanist & Master Gardener Marilyn Barker explain the inner workings and functions of trees. This will be great refresher course for us all.

Cost: Free - pizza donated by Moose's Tooth Pizza for attendees.

Contact Nancy Beardsley at 343-4288 for further information or email TREErific at [treerificanchorage@yahoo.com](mailto:treerificanchorage@yahoo.com).

### ORCHARD APPRECIATION

Wednesday, May 27, 4-8p

Bob Boyer's greenhouse @ Old Seward and west on 81st Street.

Bring your gloves, knee pads and weed digging tools and come out to help weed both the indoor and outdoor orchard and hear Bob Boyer talk about his many fruit varieties.

Pizza donated by the Moose's Tooth for the hard working weed warriors.  
Watch TREErific's listserv for more details.

### ***Other Tree Related Events***

Society of American Foresters Cook Inlet Chapter's  
**2009 Spring Tree Seedling Sale**

Tree seedlings in bundles of 20 for \$20 a bundle.  
See attached order form or visit

[http://www.aksaf.org/pdfs/CI\\_2009\\_ArborDay\\_Order\\_Form.pdf](http://www.aksaf.org/pdfs/CI_2009_ArborDay_Order_Form.pdf)

### ***PRUNING WORKSHOP***

Saturday, March 14, 1-3p Alaska Pioneer Fruit Growers at Bob Boyer's greenhouse off Old Seward and 81st. Free w/ APFG membership. Contact the Pioneer Fruit Growers for more information by calling 745-2043 or sending an email to [patmul76@hotmail.com](mailto:patmul76@hotmail.com)

### ***BIOLOGY OF TREES***

Wednesday, March 18, 830a-345p  
Sponsored by Alaska Community Forestry Program and Pacific Northwest Chapter of ISA. See attached flier for details.

### ***TREE APPRAISAL***

Friday, March 20, 830-1145a  
Sponsored by Alaska Community Forestry Program and Pacific Northwest Chapter of ISA. See attached flier for details

### ***PRUNING TREES & SHRUBS*** - Cass Turnbull

Monday, March 23, 630-930p  
Hear entertaining PlantAmnesty founder Cass Turnbull discuss pruning basics & creative solutions to the overgrown/overplanted yard/garden.  
\$5 donation collected at the door. Call Cooperative Extension Service at 786-6300 to reserve a seat. See attached flier for details.  
Sponsored by Alaska Community Forestry Program and Pacific Northwest Chapter of ISA

### ***ALASKA BOTANICAL GARDEN***

The botanical garden has scheduled many spring events, including a Spring Garden Conference and several interesting presentations. For details, visit <http://www.alaskabg.org/calendar.html>

### ***GARDEN DESIGN WORKSHOP***

April 1<sup>st</sup> and 8<sup>th</sup>, 6:30 to 8:30pm.

Learn about garden design and develop a unique plan for your own garden. For reservation and additional information please contact Eric Morey by calling 279 – 2688 or send an email to [emorey@earthscape.alaska.com](mailto:emorey@earthscape.alaska.com)

### ***SEARS MALL SPRING GARDEN SHOW***

Saturday, April 11, 10a - 6p  
Learn about local gardening clubs, buy plants, talk to friends and vendors.

### ***ANNUAL TREE CITY USA CELEBRATION***

Tuesday, May 5, 1130a - 1pm (tentative date)  
Mann Leiser Greenhouse, Russian Jack Springs Park. Enjoy a short presentation celebrating Anchorage's 3rd year as Tree City USA and help Anchorage TREErific honor three local businesses for their attractive landscapes using trees. Watch for updates on TREErific listserv.

### ***2009 MASTER GARDENER CONFERENCE***

Saturday, May 9 - all day @ Alaska Zoo on O'Malley Road.  
For details, see <http://www.alaskamastergardeners.org>

### ***ALASKA ARBOR DAY***

Monday, May 18, 2-3p  
Trailside Elementary School 5151 Abbott Road.  
Join the Municipality of Anchorage & the Anchorage Garden Club in a tree planting ceremony and program to celebrate Arbor Day in our state. Contact Nickel LaFleur - AGC Arbor Day Chair, 337-5651.  
Site for Alaska Arbor Day (which is the third Monday in May) <http://www.arborday.org/states/?state=AK>

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### ***NASA Educational Materials Website***

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. The following items are now available for downloading.

### ***Launching to the Moon and Beyond Fun Pages -- Grades K-4***

These coloring pages include labeled drawings of the Ares rockets that will take astronauts to orbit and return them to the moon. The pages also include a word search puzzle, a maze, a connect-the-dot puzzle and a cut-out Ares I rocket.

[http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Launching\\_to\\_the\\_Moon.html](http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Launching_to_the_Moon.html)

### ***On the Moon Educator Guide -- Grades 3-12***

NASA is one of the largest employers of engineers in the world. "Design Squad®," an award-winning TV show that airs on PBS, engages teams of students in imaginative engineering challenges. Together, NASA and "Design Squad" have developed the On the Moon educator guide. The guide brings hands-on engineering and the adventure of space exploration to life for students. Included in the guide are six hands-on engineering challenges that can be used during class time or in after-school programs. The activities are related to NASA's Lunar Reconnaissance Orbiter and NASA's Lunar Crater Observation and Sensing Satellite missions.

<http://www.nasa.gov/education/moonguide>

### ***"Take AIM at Climate Change" Music Video -- Grades 5-12***

The "Take AIM at Climate Change" music video features lyrics based on the latest science, images showing NASA visualizations, and rhymes and rhythms inspired by contemporary rap and hip-hop. Tommy Boots, Jené and friends review how changes at Earth's poles have global impact. The video shows how each of us can take "A-I-M" at global warming by using science and technology to "Adapt, Innovate, Mitigate."

[http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Take\\_AIM\\_at\\_Climate\\_Change\\_video.htm](http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Take_AIM_at_Climate_Change_video.htm)

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### ***Field Trip to the Moon: LRO/LCROSS Edition Informal Educator's Guide***

NASA's Lunar Reconnaissance Orbiter and the Lunar Crater Observation and Sensing Satellite missions will prepare for humans' return to the moon. The Field Trip to the Moon: LRO/LCROSS Edition includes the activities from the original Field Trip to the Moon guide plus activities relating to these two moon missions. The LRO/LCROSS activities allow participants to explore lunar stratigraphy (caused by lava flows), impact craters, the moon's history, spacecraft design in which students build models of the LRO out of edible or non-edible materials, and the future of lunar exploration.

<http://www.nasa.gov/education/ftmlroldcross>

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### **from Building A Presence (BaP) AK Newsletter**

#### ***Opportunity #1***

#### **Gr 6-12: Online content courses in Earth Science**

<http://ecourses.ncar.ucar.edu>

<<http://ecourses.ncar.ucar.edu>>

Are you seeking a PD opportunity that will enhance your ability to integrate Earth system science, climate, and

global change into your science classroom? The National Center for Atmospheric Research (NCAR) is offering a series of 7-week on-line courses for middle and high school teachers. The courses combine geoscience content, information about current climate research, easy to implement hands-on activities, and group discussion. The courses run concurrently from June 19, 2009 through August 9, 2009. There is a \$200 fee per course.

#### ***Opportunity #2***

#### **PK-12: Put Your Best LEGO Build Forward in 2009!**

<http://www.LEGOeducation.com/CreativityContest>

Now through August 2009, LEGO® Education is hosting an activity challenge for educators of all grades and subject areas!

The LEGO Smart™ Creativity Contest begins with your imagination and ends with one Grand Prize and eight monthly winners, online recognition, and the chance to share your activity with thousands of students across the nation!

The task is simple. Create an activity using only the bricks included in a LEGO Smart Kit!

Join the challenge! Log on to the URL above to request your free LEGO Smart Kit and submit your activity today!

#### ***Opportunity #3***

#### **NASA Education Unveils New Do-It-Yourself Podcast Activity**

NASA Education is excited to introduce the Do-It-Yourself Podcast activity in the For Educators section of NASA.gov. Students can preview and download audio and video clips of astronauts performing work in space and on the ground. They can then use these clips to build their own podcast or similar audio/video project. Learning modules on the DIY Podcast page will be categorized by topic to assist students with creating projects about a subject of interest. Each subject module includes video and audio clips, images, helpful information and links to related resources. A variety of audio and video clips will be provided to enhance flexibility and creativity. Students can create video or audio projects using free or inexpensive software on Windows or Macintosh computers.

Educators and their students are encouraged to distribute their NASA projects through podcasts, social networks, Web sites, CDs, DVDs or other channels that they may choose. The Do-It-Yourself Podcast Blog will keep users posted on the latest updates. Tips and suggestions for incorporating the DIY Podcast into the classroom and updates on when new topic modules are available will be

posted regularly. Use the Comments feature of the blog to share ideas and experiences with other teachers and students. To learn more and to start making podcasts, visit <http://www.nasa.gov/audience/foreducators/diypodcast/index.html>

For answers to questions about this activity, please contact Deana Nunley at [Deana.Nunley@nasa.gov](mailto:Deana.Nunley@nasa.gov).

#### **Opportunity #4**

#### **No Boundaries National Competition For High School Students**

Entry Deadline: May 15, 2009

NASA has teamed with USA TODAY Education to create the "No Boundaries" project and national student competition. This project is designed to help students explore careers in science, technology, engineering and mathematics. The No Boundaries Web site has a Teacher Toolkit and step-by-step instructions for teachers to implement the project in their classrooms. Students research and develop projects (podcast, Web site, newspaper, songs, artwork, etc.) marketing NASA STEM careers to teens and are encouraged to enter their projects in the No Boundaries National Competition. The contest deadline is May 15, 2009. For more information go to: <http://www.noboundaries-stemcareers.com/>

#### **Opportunity #5**

#### **Summer Science Workshops for K-12 Educators**

June-July 2009, Penn State University

Penn State University is offering six science workshops for K-12 educators in the summer of 2009. Participants will keep pace with the latest science research, engage in standards-based classroom activities, and explore ways to make science fun as they work side by side with Penn State faculty. Network with peers and earn 2 graduate credits and PA ACT 48 hours. The courses are aligned with the National Science Education Standards and Pennsylvania Standards for Science and Technology. Grants are awarded to all participants to cover lodging, meals, and partial travel. Tuition subsidies are available for all workshops on a competitive basis. For more information on workshop contents, or to apply for one or more workshops, visit: <http://teachscience.psu>.

--Earth's History: Interaction Between Life and the Environment, June 28-July 2, Educators Grades 6-12

--Exploring Renewable Energy Technologies and the Materials that Make it Happen June 28-July 2, Educators Grades 9-12

--Calculator-Controlled Robots: Hands-On Mathematics and Science Discovery (NEW), July 12-17, Educators Grades 6-

--Lunar Exploration (NEW), July 19-24, Educators Grades K-8

--Extreme Cosmic Messengers, July 26-31, Educators Grades 9-12

--Black Holes: Gravity's Fatal Attraction, August 2-7, Educators Grades 6-12

The workshops are an outreach program of NASA's Pennsylvania Space Grant Consortium, the Eberly College of Science, the College of Earth and Mineral Sciences, the National Science Foundation (NSF), and NASA.

#### **Opportunity #6**

#### **Operation: Resilient Planet Game**

The Jason Project and National Geographic offer Operation: Resilient Planet, a game which brings students along on real-life science expeditions with practicing researchers and explorers. Students will need to use the right tools, find the right data, and be prepared to argue their case. The game offers 3D graphics, stereo sound, and fun-to-use controls. It is correlated to National Science Education standards for grades 5-8.

<http://www.jason.org/Public/Curriculum/ORPGame.aspx?pos=1>

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#### **MARE Summer Institute (Integrating Marine Science & Literacy: An Inquiry-based Institute for K-8 and Informal Educators)**

July 5-9, 2009 (immediately following the NMEA Conference) University of California, Santa Cruz

Join us for this exciting opportunity to participate in classroom and field experiences, as we focus on meaningful connections between inquiry science and literacy. Daily instruction includes a fascinating array of ocean sciences content, field trips, and hands-on activities from the MARE and NOAA-funded Ocean Sciences Sequence for grades 3-5 curricula. The 2009 MARE Summer Institute is intended for classroom teachers, science resource teachers, literacy specialists, bilingual teachers, curriculum leaders, professional developers, school administrators, and non-classroom educators. For more information, please

visit <http://www.lawrencehallofscience.org/mare/profdev/summer.html>

<<http://www.lawrencehallofscience.org/mare/profdev/summer.html>> or call or email the MARE office at 510-642-5008 or [MARE\\_LHS@berkeley.edu](mailto:MARE_LHS@berkeley.edu) <[mailto:MARE\\_LHS@berkeley.edu](mailto:MARE_LHS@berkeley.edu)> .

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## 2009 UAS Summer Science Institute

I am pleased to send to you our 2009 Summer Science Institute flyer and REGISTRATION form for your secondary science teachers. This science content-laden week, from June 15-19, here at the University of Alaska Southeast, will be packed with a wide array of purposeful and intentional presentations and excursions designed to enhance both the breadth and depth of science knowledge of Alaska's secondary science teachers.

The presentations will be offered by our stellar UAS Science faculty, UAS Education faculty, Science practitioners (members and researchers with the National Weather Service, NOAA, Forest Service, Alaska Fish and Game, etc), Science Naturalists (Discovery Southeast-an outdoor science education organization) and members of the Alaska Department of Education and Early Development, among others.

Participants have an option of attending a two-day science content PRAXIS II "training camp" on the final two days of the Institute, or they can opt for the two days of outdoor science-focus excursions for additional intensive and hands on science studies.

We believe this Institute will provide essential, up to date skills and understanding for your science teachers (grades 8-12) which will rejuvenate and inspire them to bring exciting new information and strategies into your district's classrooms, benefiting all of your students!

Please send this information out to all of your secondary administrators and science teachers as soon as possible. We have received a high level of interest, and want to particularly encourage districts who may have secondary science teachers in need of becoming Highly Qualified, as noted by NCLB, to support their teachers in attending this UAS Summer Science Institute with us in June! We have worked diligently to keep our costs as low as possible to make this event accessible to all.

\*\*Space is limited, so early registration is encouraged.

Questions can be sent to me at [diana.gifford@uas.alaska.edu](mailto:diana.gifford@uas.alaska.edu)

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## 2009 Exploring Space Lectures

The 2009 Exploring Space Lectures will feature world-class scholars discussing astronomy, the vastness of the universe, the search for Earth-like planets and our unpredictable sun. The lectures will be held at the National Air and Space Museum in Washington, D.C., and are free to attend. Tickets are required. If you are unable to attend the lectures, they will be webcast live for free viewing online. Lecture videos will also be archived.

### *Why Is Astronomy So Popular?*

David H. Levy, well-known interpreter of astronomy and sky lore, will discuss what makes astronomy such a popular subject. Astronomy imagery is everywhere in our culture -- in literature, songs, art, and on popular items from billboards to cars.

The lecture will take place on March 25, 2009, at 7:30 p.m. Come early for a free film screening and to meet the lecturer.

For more information, visit

<http://www.nasm.si.edu/events/eventDetail.cfm?eventID=1215>.

### *What IS the Universe?*

Galileo's observations of the universe revealed depth and great dimension. As studies of astronomy continue, human understanding of the universe has changed in profound ways. Dr. Vera Rubin of the Carnegie Institution of Washington will look further at the question, "What IS the universe?"

The lecture will take place on April 9, 2009, at 7:30 p.m. Come early for a free film screening and to meet the lecturer.

For more information, visit

<http://www.nasm.si.edu/events/eventDetail.cfm?eventID=1217>.

### *Are We Alone? Searching for an Exoplanet Like Home*

For thousands of years people have wondered, "Are we alone in the universe?" Join Dr. Sara Seager, planetary science professor at MIT, as she discusses the race to discover a planet very similar to Earth and answer ancient questions about other worlds.

The lecture will take place on May 27, 2009, at 7:30 p.m. Come early for a planetarium free film screening and to meet the lecturer.

For more information, visit

<http://www.nasm.si.edu/events/eventDetail.cfm?eventID=1218>.

### ***Our Sun: Is It a Steady Performer?***

Join solar astronomer Dr. Alan M. Title for a discussion about the sun. Get to know the sun a bit better, if only to appreciate that it is a more violent, and largely unpredictable, place than ever thought possible.

The lecture will take place on June 18, 2009, at 7:30 p.m. Come early for a free film screening and to meet the lecturer.

For more information, visit

<http://www.nasm.si.edu/events/eventDetail.cfm?eventID=1219>.

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### **EstuaryLive! Explore Our Nation's Estuaries**

Friday, May 1st & May 15th, 2009

On May 1st, join naturalists from around the country and explore one of our nation's most precious resources- estuaries, where rivers meet the sea. EstuaryLive is an annual, free, live, interactive, field trip through our nation's estuaries.

What makes EstuaryLive interactive? Participants have an opportunity to submit questions, comments and responses directly to field trip leaders during the broadcast. Many of these questions are answered live during the broadcast. This year's program will feature six 30-minute segments broadcasting LIVE from three of NOAA's National Estuarine Research Reserves (NERR): Hudson River NERR in New York, South Slough NERR in Oregon, and Padilla Bay NERR in Washington. We will include a discussion of the impacts of global climate change on our coastal ecosystems.

For more information & other educational materials:

<http://www.estuaries.gov/>

Register for the broadcast:

<http://www.estuaries.gov/estuaries101/EstuaryLive/Registrar.aspx> <<http://www.estuaries.gov/>>

Date: Friday, May 1st, 2009

Can't make the May 1st broadcast? EstuaryLive will broadcast from Weeks Bay NERR in Alabama on May 15th. For more information about estuaries, EstuaryLive, the Estuaries 101 Curriculum and other educational tools, please visit [www.estuaries.gov](http://www.estuaries.gov) <<http://www.estuaries.gov/>> .

[www.estuaries.gov](http://www.estuaries.gov) <<http://www.estuaries.gov/>>

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### **NABT Biology Educator Leadership Scholarship (BELS)**

Applications are now being accepted for the new NABT Biology Educator Leadership Scholarship (BELS). The BELS program was established to encourage and support teachers who want to further their education in the life sciences or life science education.

Any NABT member who has less than five years classroom experience and is currently enrolled (or plans on enrolling) in graduate studies at a Masters or Doctoral level is eligible. Full details are available at <http://www.nabt.org/websites/institution/index.php?p=492> <[http://nabt.securewebcc.com/procs/CLink.php?c=165&amp;s=245&amp;m=2&amp;r=raymond\\_gail%40asdk12.org&amp;lid=1184](http://nabt.securewebcc.com/procs/CLink.php?c=165&amp;s=245&amp;m=2&amp;r=raymond_gail%40asdk12.org&amp;lid=1184)> .

An award of \$5000 will be administered directly to the recipient's graduate school in two installments of \$2500 (one payment for two consecutive years). Completed applications must be submitted by April 1, 2009 for consideration, and the scholarship winner will be notified by mail in mid-May.

All applications and questions should be directed to Bob Melton at [bmelton@sbcglobal.net](mailto:bmelton@sbcglobal.net) <<mailto:bmelton@sbcglobal.net>> or 405/495-5200, ext. 1284. This program is made possible with generous support from NABT members.

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### **STS-119 Launch**

NASA's Digital Learning Network is celebrating the launch of space shuttle mission STS-119. The crew of STS-119 includes two classroom teachers who were selected as astronauts in 2004. Scheduled to launch on March 11, 2009, the STS-119 crew will deliver and install the space station's final truss segment and solar arrays. Join the DLN for the following special event.

STS-119 Launch! -- March 11, 2009, 8:20-9:30 p.m. EDT -- Join NASA's Digital Learning Network for a live webcast of the STS-119 space shuttle launch to the International Space Station. Submit questions via e-mail and get them answered live as NASA counts down to lift-off. The show begins at 8:20 p.m. EDT and includes the live launch of STS-119 at 9:20 p.m. EDT.

To learn more about this event, visit <http://dln.nasa.gov/dln/>.

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