



# SCIENCE BYTES

JANUARY 12, 2009 VOLUME 20

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

## Wildlife Wednesdays: Free Lecture Series

### Wednesday, January 14: Polar Bears and Changing Sea Ice

Karyn Rode, a wildlife biologist with the U.S. Fish and Wildlife Service, discusses the science behind concerns of declining sea ice and its effect on polar bears.

ED580 for teachers: Teachers may earn one graduate credit towards continuing education requirements by attending four Wildlife Wednesdays

lecture and a Saturday workshop on April 11. For information, contact Elizabeth Manning at ADF&G, [elizabeth.manning@alaska.gov](mailto:elizabeth.manning@alaska.gov) or 267-2168.

## All About Frozen Ground - National Snow and Ice Data Center

The National Snow and Ice Data Center (NSIDC) has released a new educational website on frozen ground: All About Frozen Ground. For more information, visit the site at: <http://nsidc.org/frozenground/>. All About Frozen Ground provides comprehensive information about the importance of frozen ground. Frozen ground and permafrost, or ground that stays frozen for at least two years, is key to understanding climate, frozen ground ecosystems, and the interaction between land and atmosphere.

Explore All About Frozen Ground to learn about the science behind frozen ground and why frozen ground matters to people, plants, and animals all over the world. Read an interview with permafrost expert and NSIDC Senior Scientist Tingjun Zhang, and browse a list of reading and classroom activities for K-12 learners. While at the site, submit your comments on the feedback form.

For further information, please visit the site at:

<http://nsidc.org/frozenground/>

Or contact:

NSIDC User Services Email: [nsidc@nsidc.org](mailto:nsidc@nsidc.org)

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## ArcticInfo Website

ArcticInfo is administered by the Arctic Research Consortium of the United States (ARCUS). Please visit us on the World Wide Web at:

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

At any time you may: Subscribe or unsubscribe by using the web form located at:

<http://www.arcus.org/arcticinfo/subscription.html>

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## Photography & Videography Contest

The University of Alaska International Polar Year Young Researchers' Network (APECS Alaska) is sponsoring a photo and video contest to encourage photographers and videographers to document today's Alaska. This contest is

open to anyone - not just Alaska residents - so those of you doing work in Alaska, feel free to participate!

“International Polar Year is our chance to show Alaska to the world,” says network member and contest organizer Kelly Newman. “We want to collect as many photos and videos from young people today as we can and preserve them so that they can provide a snapshot of Alaska to future IPY participants.”

The contest is open to both students and the public and will culminate in a digital archive for use by future International Polar Year participants. Photos and videos may be submitted through Feb. 16, 2009 in the following categories: discovering the Arctic, my life in the North, Alaska’s inconvenient truths and experiencing the wild.

A panel of experts will judge entries. Winners will be showcased in a film and photo festival to be held this spring in Fairbanks. Prizes will be awarded in both student and non-student categories. Winners will receive a gift certificate to B&H photo and video supply store or to Amazon.com.

Contest guidelines can be found at [akshorts.blogspot.com](http://akshorts.blogspot.com). The University of Alaska IPY Young Researchers’ Network is powered by young scientists from UA campuses across the state and aims to take science off campus through outreach to the public and students of Alaska. For more information about the network, visit [ipy-youth.uaf.edu](http://ipy-youth.uaf.edu).

CONTACT: Kelly Newman at [ftkan@uaf.edu](mailto:ftkan@uaf.edu) or call 474-5IPY. Jenn Wagaman, UAF Center for Research Services public information officer, at 907-474-5082 or via e-mail at [jenn@alaska.edu](mailto:jenn@alaska.edu).

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### River of Words Environmental Poetry and Art Contest K-12

Deadline: February 15, 2009

River of Words conducts a free international poetry and art contest for youth on the theme of watersheds and the environment. The contest helps youth explore the surroundings in which they live, and to express what they discover through poetry and art. It is held annually in affiliation with the Library of Congress Center for the Book. The grand prize and international winners receive an all-expense paid trip to Washington, DC, to attend the awards ceremony at the Library of Congress.

<http://www.riverofwords.org/contest/index.html>

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### Greetings from the S'COOL Team! Welcome to Issue #32 of the S'COOL E-note.

[http://asd-www.larc.nasa.gov/SCOOOL/Enotes/en\\_dec2008.html](http://asd-www.larc.nasa.gov/SCOOOL/Enotes/en_dec2008.html)

This month's E-note includes: S'COOL is turning 12!

1. Global Cloud Observation Day
2. Join us for a webcast
3. Opportunity for NASA Explorer Schools
4. The next generation: Introducing Temperature Measurement

#### 1. Global Cloud Observation Day

January 13, 2009 will mark the 12th anniversary of the first S'COOL cloud observation report. To mark the day, we invite you to participate in a Global Cloud Observation Day. Please invite anyone you know to participate as well. We will be collecting observations through the S'COOL Rover

<<http://asd-www.larc.nasa.gov/SCOOOL/Rover/>> website, which does not require advance registration. We would especially like to invite former S'COOL student participants to take part in this day.

Would your local media be interested in this story? Provide us the contact information (name, mailing address, and e-mail or phone number) so that we can send the NASA press release for the event.

#### 2. Join us for a webcast

We are planning to have a webcast to celebrate the anniversary. Join us at 2pm Eastern Time (19:00 UT) for this event. Details on how to access the webcast will be posted on the NASA Digital Learning Network <<http://dln.nasa.gov/dln/>> website as the date nears.

Planning for this webcast is still underway, but we hope to bring in a number of people from the S'COOL and CERES teams to talk about what they do and what we are learning from this work.

Do you have a great S'COOL story? Especially from the early years? Send us a note and maybe we can incorporate it into the webcast.

#### 3. Opportunity for NASA Explorer Schools

During the S'COOL webcast, we have the ability to include live videoconference connections to a few other locations. Since NASA Explorer Schools generally have the necessary technology to do this, we are offering that option. If you are an Explorer School and would like to be a live part of the S'COOL webcast, please send us a short note with a suggestion of how you would like to involve your students in this event. We will select a few schools to take part, based on the ideas you propose.

#### 4. The next generation: Introducing Temperature Measurement

Looking toward the next 12 years, we want to make sure that a new generation of students will be ready to participate in S'COOL. This month, take a look at a nice lesson aimed at students in grades K-2, Introducing Temperature Measurement

<[http://scool.larc.nasa.gov/cgi-bin/view\\_lessonplan.cgi?id=47](http://scool.larc.nasa.gov/cgi-bin/view_lessonplan.cgi?id=47)>

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The CERES S'COOL Project - **Students' Cloud Observations On-Line**

<http://asd-www.larc.nasa.gov/SCOOL/scool@larc.nasa.gov>

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**from ANROE Electronic Newsletter**

**Workshop / Training Opportunities**

**Fairbanks: Registration deadline: February 13- Project Wild / Project Learning Tree Fields and Forests workshop- February 20 and 21.**

Registration is required. Participants receive three activity guides and additional support materials. Correlation guides and web resources for Alaska State Content Standards are available to teachers. UAA graded (CRN 580Q) credit is \$69. Materials are \$30. For more information, contact: Matt Weaver- [matt.weaver@alaska.gov](mailto:matt.weaver@alaska.gov) <<mailto:matt.weaver@alaska.gov>> , 761-6233.

**New Orleans: March 19-22- National Conference on Science Education**

Join more than 10,000 science educators in New Orleans for the most prominent and comprehensive NSTA conference.

<http://www.nsta.org/conferences/2009new/?lid=con>  
<<http://www.nsta.org/conferences/2009new/?lid=con>>

**Resources for Educators**

**EXPLO.TV**

This website is the video component of the Exploratorium: Museum of Science, Art and Human Perception in San Francisco. This site offers webcasts, podcasts, and video clips, with many in the Ice Stories series - dispatches from polar scientists. You can browse by subject, category, and much more.

<http://www.exploratorium.edu/webcasts/index.php>  
<<http://www.exploratorium.edu/webcasts/index.php>>

**Wetlands & Wonder Video: Reconnecting Children with Nearby Nature**

This 14-minute video was produced by the U.S. Environmental Protection Agency discusses the loss of wetlands and the effect that the loss of natural areas closest to us has on our connection to the natural world. The video includes streaming text for the hearing impaired.

<http://www.epa.gov/owow/wetlands/education/wetlandsvideo/>  
<<http://www.epa.gov/owow/wetlands/education/wetlands>

[video/](#)>

**Opportunities for Educators**

**Application deadline: January 31- Marine Wildlife Photo Contest**

The Ocean Conservancy invites entries in the 2009 Marine Wildlife & Seascape Photo Contest. Share your visions of our ocean and send your best ocean seascape and marine wildlife images.

<http://www.oceanconservancy.org/site/PageServer?pagename=photoContest>

<<http://www.oceanconservancy.org/site/PageServer?pagename=photoContest>>

**Application deadline February 9: Earthwatch Educator Fellowships**

Fellowships are available for educators to participate in international and U.S. Earthwatch Conservation Expeditions.

<http://www.earthwatch.org/aboutus/education/edopp/edfund>

<<http://www.earthwatch.org/aboutus/education/edopp/edfund>>

**National Schoolyard Birding Challenge**

This is a monthly bird watching contest open to students in all public and private schools in North America. Student participants work together to observe, identify, and record various bird species found on their school grounds. Teams compete for prizes each month and will be entered to win monthly drawings.

<http://www.fledgingbirders.org/challenge.html>

<<http://www.fledgingbirders.org/challenge.html>>

**Programs**

**Anchorage: January 14- Go Dog, Go! What Makes Sled Dogs Tick**

This program is at 7pm at the BLM Campbell Creek Science Center. Running 1000 miles or more in 10 days may seem superhuman, but it is routine for a racing sled dog. Ironically, dogs and humans may have enough in common that by studying sled dogs we may be able to improve human exercise capacity. Free and open to the public.

**Anchorage: January 14- Polar Bears and Changing Sea Ice-**

This program is presented by the U.S. Fish and Wildlife Service and will take place at 7pm in the Marston Theater, Loussac Library.

## Funding Opportunities

### **Application deadline: January 30- Boating and Fishing Education Grants for 2009.**

The Recreational Boating and Fishing Foundation's National Youth Fishing & Boating Initiative is offering a total of \$800,000 in funding. Youth-focused boating, fishing and conservation organizations are encouraged to apply. Key requirements of RBFF's grant application guidelines include introducing boating and fishing to minorities and underserved communities. You can download an application, score sheet and FAQ at [RBFF.org](http://RBFF.org). Grants will be announced in March 2009.

### **Application deadline: January 30- Fund for Teachers Professional Development Grants**

The Fund for Teachers Grant awards PreK-12 teachers with funds to support professional development activities. <http://www.fundforteachers.org/about.html>  
<<http://www.fundforteachers.org/about.html>>

## NASA / NABSE Lecture Series for 2009

Free, interactive programs allow you and your students to learn more about our home planet and the universe beyond through video-conferencing and Webcasts.

Jan.-April: NASA Langley Research Center/National Alliance of Black School Educators (NABSE) Lecture Series for 2009. Dr. Joel Levine, Lecturer

- Lecture 1 – January 22, 2009, 11-12:30 EST: Exploring Other Worlds
- Lecture 2 – February 19, 2009, 11-12:30 EST: The Earth System
- Lecture 3 – March 19, 2009, 11-12:30 EST: Earth and Mars, a Tale of Two Planets
- Lecture 4 – April 9, 11-12:30 EST: Global Warming, Causes and Consequences

<http://dln.nasa.gov/dln/>

Just click on the appropriate date and lecture.

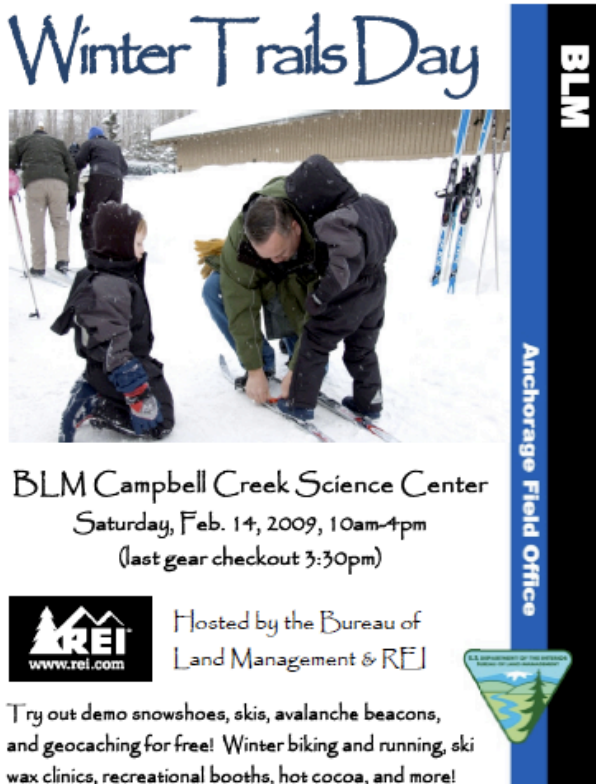
Dr. Arlene S. Levine  
Green Activities Manager  
Advanced Planning and Partnerships Office  
NASA Langley Research Center  
Hampton, Virginia 23681-0001  
Mail Stop 218  
Telephone: 757-864-3318  
cell: 757 969-8343  
Fax: 757 864-8314  
E-Mail: [arlene.s.levine@nasa.gov](mailto:arlene.s.levine@nasa.gov)

## Free Online Training Available for Informal Educators Interested in Using Explore! Ice World Activities

Explore! Ice Worlds is a suite of hands-on inquiry activities designed to be used with children ages 8 to 13 in celebration of the International Polar Year. Developed by the Lunar and Planetary Institute and funded by NASA, the activities are intended for the informal learning environment, including libraries, after-school programs and museums. All activities are tied to National Science Education Standards, and all use inexpensive materials that are easy to find. The activities are available online at

<http://www.lpi.usra.edu/education/explore/ice/activities/>.

Free online training is available for informal educators interested in using the Explore! Ice Worlds activities. Training occurs in either one four-hour session or over three separate one-and-a-half-hour sessions, spaced a week apart. A complete training session includes discus-



**Winter Trails Day**

**BLM**  
Anchorage Field Office

BLM Campbell Creek Science Center  
Saturday, Feb. 14, 2009, 10am-4pm  
(last gear checkout 3:30pm)

Hosted by the Bureau of Land Management & REI

Try out demo snowshoes, skis, avalanche beacons, and geocaching for free! Winter biking and running, ski wax clinics, recreational booths, hot cocoa, and more!

[www.rei.com](http://www.rei.com)

U.S. Department of the Interior  
Bureau of Land Management

sion with a NASA polar scientist and demonstrations of the Explore! Ice Worlds activities.

Only five more training sessions are scheduled -- sign up today!

**Jan. 8, 15 and 22, 2009:** A series of sessions lasting 90 minutes each will begin at 2:00 p.m. EST.

**Jan. 13, 2009:** A four-hour session will begin at 1:00 p.m. EST.

**Feb. 10, 17 and 24, 2009:** A series of sessions lasting 90 minutes each will begin at 3:00 p.m. EST.

**Feb. 12, 2009:** A four-hour session will begin at 1:00 p.m. EST.

**March 4, 2009:** A four-hour session will begin at 1:00 p.m. EST.

Participants are eligible for drawings for Earth and space resources. Those who complete the training will receive a certificate for four professional development hours.

Registration is required. Please contact Katy Buckaloo at [buckaloo@lpi.usra.edu](mailto:buckaloo@lpi.usra.edu) or 281-486-2106 to register.

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### **Students Invited to Submit Their Creative Energy Project Entries**

Johnson Controls <<http://www.johnsoncontrols.com>>, a global multi-industrial leader in energy efficiency and sustainability, invites kindergarten through 12th grade students across North America to enter the Igniting Creative Energy competition. The challenge, a program developed and funded by Johnson Controls and the National Energy Foundation <<http://www.nef1.org/>>, is a competition that encourages students to learn more about energy and the environment.

Student entries should demonstrate an understanding of what an individual, family, or group can do in their home, school, or community to conserve energy and help the environment. Students may choose to express their ideas in any creative format such as science projects, essays, stories, artwork, photographs, music, videos, Web based applications, multimedia projects, etc. They may also submit recent service projects.

The challenge is open to all students in grades K-12 in the U.S. and Canada, excluding Quebec.

A total of four grand prizes will be awarded to three students and one teacher. Three students, one in each grade cluster, whose work best addresses the challenge criteria, will receive a hosted trip to Washington, D.C., for themselves and a parent or legal guardian. Also, the teacher with the highest average score of student work

from 15 or more qualifying entries will also receive a trip for two to Washington, D.C. While in Washington, D.C., students will share their winning challenge entries with government and energy leaders during the 20th Annual Energy Efficiency Forum, June 15-16, at the National Press Club.

In addition to the national winners, the highest scoring student in each state or province will be recognized. Schools may also be eligible to receive a \$1,000 U.S. charitable donation to help beautify their school, educate their students, or impact their community.

Official rules and entry form are available at the program's Web site.

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

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### **The Heat from Within - Earthly Insights into Planetary Volcanism**

A NASA-sponsored field-based workshop, 12-19 July 2009 for intermediate grade level science teachers (other educators are invited)

Spend the week with planetary scientists investigating different types of volcanos in the Bend and Crater Lake regions of Oregon. Contrast these Earth-based analogs with volcanic features on Mars, the Moon, Venus, and even the moons of Jupiter, Saturn, and Neptune! From these field experiences and classroom exercises, participants will build an understanding of the planetary processes that produce volcanos, and the patterns of volcanism on planets in our solar system.

The experience will be divided between the field and lab, where participants work with classroom-tested, hands-on inquiry based activities and resources that can be used to enhance Earth and space science teaching in the classroom. Participants receive lesson plans, supporting resources, and presentations. A limited number of grants are available to cover registration.

Join us for hands-on, real-world experience to enhance your teaching about Earth and space science — and to make connections between these exciting fields of research!

For more information about costs and logistics, and to apply for the experience, please visit:

<http://www.lpi.usra.edu/education/fieldtrips/2009/>

<<http://www.lpi.usra.edu/education/fieldtrips/2009/>>

(if link does not work, please copy and paste URL into your browser)

Applications are due April 7, 2009 Participants will be notified of their acceptance by April 14, 2009.

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