



SCIENCE BYTES

OCTOBER 5, 2009 VOLUME 9

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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2009 - Alaska Math & Science Conference

INQUIRY - The Bridge to Understanding

October 14-17, 2009 Juneau, AK

NSTA Conferences 2009-2010

March 17-20, 2010 Philadelphia, PA

Science Olympiad

March 20, 2009 Teeland & Mat-Su Career and Tech HS

Alaska State Science & Engineering Fair

March 26-28, 2010 Begich Middle School

Wanted: Citizen Scientists

Youth ages 13-26 are invited to submit original scientific research or position papers to the Citizen Science Technical Board for the 2010 CitizenScience paper competition! Winners will, in addition to publication, have the chance to present their work at the United Nations(UN) Commission on Sustainable Development, convening at UN Headquarters, NYC in 2010.

"The ability to speak before some of the most influential people in the world was indeed an honor and something that I will remember for years to come."

– Lee Blaney, 2005 Citizen Scientist

TOP FIVE reasons to submit your work:

1. Share your passion for addressing the world's toughest challenges through sound science
2. Join the SustainUS delegation to the 18th Session of the UN Commission on Sustainable Development in New York.
3. Present your work and communicate the importance of youth involvement to international leaders
4. Get published in Citizen Science
5. Start a relationship with the premier youth-run network for sustainable development, SustainUS!

CitizenScience, the science and technology program of SustainUS, is hosting its annual paper competition. The winning submission from each group will be published in Citizen Science, an online journal that honors youth in the United States that are interested in enriching public dialogue with innovative and scientific approaches to sustainable development. In addition, authors of winning submissions will have the opportunity of presenting their paper at the UN Commission on Sustainable Development's 18th Session (UN CSD-18) in New York City in May 2010. At UN CSD-18, SustainUS will be joined by the US State Department in recognizing your initiative, leadership and insight.

Papers should be written for a non-scientific audience on natural or social science topics related to the economic, social, technological or environmental dimensions of sustainable development addressed by the current session of the UN Commission on Sustainable Development. UN CSD-18's topics are: Transport, Chemicals, Waste Management (Hazardous & Solid Waste), Mining, and 10 Year Framework of Programmes on Sustainable Consumption & Production Patterns. Papers need not describe original research, though original research is welcome and encouraged. Based on current education affiliation, submissions will be divided and judged in the following groups: high-school, undergraduate and graduate.

Please submit your paper to the Citizen Science Technical Board. Graduate students: please submit your abstract by December 15th, 2009. Submissions from high-school students and undergraduate students will be accepted on a rolling basis until March 1, 2010. Please direct all paper submissions and questions to CitizenScience@SustainUS.org <<mailto:CitizenScience@SustainUS.org>>. For more information, competition entry rules, and winning papers from prior years, please visit www.sustainus.org/citizenscience <<http://www.sustainus.org/citizenscience>>. Good luck

****Please forward extensively and pardon cross-postings****

Sun-Educator Conference at NASA's Jet-Propulsion Lab

Join NASA's Jet Propulsion Laboratory Education Office for an education conference being held **Oct. 17, 2009**, near Pasadena, Calif. The conference will celebrate the most prominent and vital feature in solar system, the sun.

During this day-long conference, experts from the Voyager, Ulysses, Genesis, STEREO and Earth-exploring missions will be on hand to discuss the structure and content of the sun; current study of its composition; solar cycles; the importance of the sun to Earth; and the inner and outer heliosphere. The presenters will discuss and demonstrate activities that can be used in the classroom to promote a greater appreciation of the inspirational aspects of space exploration.

This conference is open to all formal and informal educators interested in Earth and space science and exploration. Students in high school and college can also attend.

Pre-registration is required. Participants must register by **Oct. 5, 2009**. Walk-up registration will not be possible for this conference.

For more information, visit

<http://www.nasa.gov/centers/jpl/education/sunconf-20090921.html>. Question about registration should be sent to Andrea Angrum at andrea.angrum@jpl.nasa.gov or Aimee Meyer at aimee.l.meyer@jpl.nasa.gov.

IPY Youth Time Capsule Writing Contest

New deadline for entries: December 1st, 2009

The International Polar Year Youth Time Capsule Project Committee is holding a writing contest for Pan-Arctic youth, and is calling for submissions about life in the north that will be included in the IPY Time Capsule, to be re-opened 25 years from now.

The IPY Time Capsule Project is a youth-led initiative, aimed at involving northern youth in the International Polar Year in meaningful and creative ways. The Project has been developed based on the belief that youth participation is essential to ensuring the lasting legacy of the International Polar Year. So far, the Time Capsule Project has included photography, art work and youth surveys, and the Committee is now seeking pieces of writing, so that a written interpretation of life in the north through the eyes of youth can be presented along side the visual components of the Time Capsule.

Youth between the ages of 12 and 18, who are interested in submitting an entry to the writing contest, are asked to submit a one-page piece of writing, in any format (prose, poetry, etc). Entries will be accepted in any language that is currently spoken in the North, and prizes will be awarded to the first and second place entrants in each of two categories: English/French and Traditional Language/Other.

The First Prize winner in each category will receive an Ipod Touch 32 GB, and the Second Prize winner will receive an Ipod Nano 16GB.

The deadline for entries is December 1st, 2009.

All entries will be considered for inclusion in the IPY Time Capsule Project, and select entries will be displayed in a physical Time Capsule exhibit, slated for April-May 2010, as well as on an online exhibit, which will be available to the public beginning in late 2009 and displayed until January 2011.

In order to participate in the contest, youth can submit entries by email to ipy.timecapsule@gmail.com, or by mail to P.O.Box 11050, Yellowknife, NT, X1A 3X7, Attn. Bree Denning.

Contact – Bryany Denning, 867 873 9337,

lbbd@queensu.ca

Events Planned for Upcoming LCROSS Impact on Lunar Surface

In 1969, millions of people around the world gathered around their television sets to watch NASA make history by putting the first man on the moon. Now, forty years later, we will gather around the television set again to watch the beginning of NASA's Return to the Moon.

On **Oct. 9, 2009, at approximately 7:30 a.m. EDT**, the Lunar Crater Observation and Sensing Satellite, or LCROSS, along with the spent Centaur upper stage rocket will impact a permanently shadowed crater near the lunar south pole.

Following four minutes behind, LCROSS will fly through the debris plume created by the Centaur. LCROSS will collect and relay data back to LCROSS mission control at NASA's Ames Research Center in California before impacting the surface and creating a second debris plume. The impacts will provide a wealth of data that will help scientists determine the contents of these permanently shadowed craters at the lunar poles.

Viewing parties are planned across the country to witness this historic event. To see a list of events taking place in your area, visit http://www.nasa.gov/mission_pages/LCROSS/impact/event_index.html.

For those unable to attend an event in person, NASA TV will stream live video. The broadcast will be available online at <http://www.nasa.gov/ntv>.

For this historic day, NASA has created the LCROSS Impact Kit. This kit is full of videos and educational materials to inspire and engage your students in America's return to the moon. The kit is available on the Web at <http://lcross.arc.nasa.gov/impactkit/>.

The ExploraVision Competition

<http://www.dmail.exploravision.org/?lid=evm20090928> now in its 18th year, is an annual event that awards more than \$240,000 in savings bonds each year to the winning teams. K-12 students in small groups (2-4), led by a

teacher/coach, create a vision of a future technology relevant to their lives or to society in general.

Diane Pollitt, Gifted and Talented Educator at Heatherstone Elementary, Olathe, KS said, "I've been involved with ExploraVision for 17 of the program's 18 years. I feel that through the use of a variety of hands-on, project-based learning experiences, and a process of questioning, exploration and discovery, students acquire learning skills they'll use their entire lives."

Students achieve

Problem solving and critical thinking skills

Commitment and initiative development

Communications skills

Cooperative learning skills

Interdisciplinary learning

Inquiry-based learning

A team project can take as little as three weeks, two months, or four months. Build this project into your curriculum. Click here for a list of Frequently Asked Questions

<http://www.exploravision.org/frequent-questions/?lid=evm20090928> .

To learn how and get more details, visit

<http://www.dmail.exploravision.org/?lid=evm20090928>.

Astronomy Trading / Playing Cards

The whole set of the trading cards is in a style of a playing cards. There are 13 telescopes atop of Mauna Kea, so 13 cards in one suit is the perfect style. We also included images of Faulkes Telescope on Maui Island, some educational and outreach sites, and a Hawaiian telescope.

The cards are only for astronomy education, public outreach, and personal use. **THEY SHOULD NOT BE SOLD BY ANYONE.** <http://www.naoj.org/IYA/Cards/>

Berkley Astronomy Talks Online

<http://astro.berkeley.edu/~scroft/ia/>

ISS EarthKAM Fall 2009 Mission

Middle school educators are invited to join NASA for the International Space Station EarthKAM Fall 2009 Mission on **Oct. 20-23, 2009**. Find out more about this exciting opportunity that allows students to take pictures of Earth from a digital camera on board the International Space Station.

ISS EarthKAM is a NASA-sponsored project that provides stunning, high-quality photographs of Earth taken from the space shuttle and International Space Station. Since 1996, ISS EarthKAM students have taken thousands of photographs of Earth by using the World Wide Web to direct a digital camera on select spaceflights and, currently, on the International Space Station.

For more information about the project and to register for the upcoming mission, visit the ISS EarthKAM Home Page: www.EarthKAM.ucsd.edu.

If you have questions about the EarthKAM project, please e-mail ek-help@earthkam.ucsd.edu.

Help Project FeederWatch Track Backyard Birds

Bird watchers needed to help scientists discover changes in bird populations

There was a massive southern movement of Pine Siskins during the 2008-09 season. [Read more.](#)

Ithaca, NY—What happens in the backyard should not stay in the backyard—at least when it comes to bird feeders. By sharing information about which birds visit their feeders between November and April, backyard bird watchers can help scientists track changes in bird numbers and movements from year to year, through [Project FeederWatch](#) run by the [Cornell Lab of Ornithology](#) and [Bird Studies Canada](#).

Project FeederWatch begins on November 14 and runs through early April. Taking part is easy. Anyone can count the numbers and kinds of birds at their feeders and enter their information on the FeederWatch website. Participants submitted nearly 117,000 checklists last season. Since 1987, more than 40,000 people from the United States and Canada have taken part in the project.

“To get the most complete picture of bird movements, we always need new sets of eyes to tell us what species are showing up at backyard feeders,” says David Bonter, leader of Project FeederWatch. “Participants always tell us how much fun it is and how good it feels to contribute to our understanding of birds by submitting their sightings.”

Project FeederWatch is for people of all ages and skill levels. To learn more and to sign up, visit www.feederwatch.org or call the Cornell Lab toll-free at (866) 982-2473. In return for the \$15 fee (\$12 for Cornell Lab members) participants receive the *FeederWatcher's Handbook*, an identification poster of the most common feeder birds, a calendar, complete instructions, and *Winter Bird Highlights*, an annual summary of FeederWatch findings.

Participant Nancy Corr of Harrisburg, Oregon, sums up her Project FeederWatch experience: “Thanks for the wonderful opportunity to share our love of birding and to participate in something meaningful!”

Regional highlights based on 2008-09 FeederWatch reports:

Southwest & California: On most lists: House Finch. Fewer reports: Western Scrub-Jay. Increasing: Lesser Goldfinch and Eurasian Collared-Dove.

Southeast & South-Central: On most lists: Northern Cardinal. Increasing: White-winged Dove and Eurasian Collared-Dove. Rare bird: Yellow-headed Blackbird (Florida).

Pacific Northwest & Rocky Mountains: On most lists: Dark-eyed Junco. Increasing: Anna's Hummingbird and

Golden-crowned Sparrow. Rare bird: Yellow-throated Warbler (Alberta).

Northeast quarter of U.S. & Southeastern Canada: On most lists: Black-capped and Carolina Chickadees. Fewer reports: Evening Grosbeak. Rare bird: Green-tailed Towhee (New Jersey).

North-Central & Mid-Central: On most lists: Downy Woodpecker. Fewer reports: American Crows. Increasing: American Robin and Cedar Waxwing. Rare bird: Cape May Warbler (Saskatchewan).

Alaska & Northern Canada: On most lists: Common Redpoll. Increasing: Pine Grosbeak and Bohemian Waxwing. Fewer reports: Steller's Jay. Rare bird: Purple Finch (Alaska).

NASA Provides Resources for Earth Science Week

The theme of this year's Earth Science Week, "Understanding Climate," promotes scientific understanding of the timely and vital topic of Earth's climate. NASA resources and activities will be available to educators and students before, during and after this special week, which takes place Oct. 11-17:

* Tides of Change: A five-part video series on the connection between ocean and climate will be posted during Earth Science Week at <http://climate.nasa.gov>.

* NASA's Digital Learning Network (<http://dln.nasa.gov>) will host an Oct. 14 webcast with NASA oceanographers Marcianna Delaney and Gene Feldman on ocean science discoveries and careers.

* NASA has contributed several items included in an Earth Science Week educator kit. To order a kit, visit <http://www.earthsciweek.org/>

* <http://climate.nasa.gov/> will be a one-stop shop for NASA Earth Science Week education resources related to understanding climate.

Earth Science Week is conducted annually by the American Geological Institute in cooperation with various sponsors, including NASA.



OASLC Teacher Workshop:

Climate Change in the Last Frontier

WHO: 4th - 8th Grade Teachers
WHEN: November 7-8, 2009
WHERE: The Alaska SeaLife Center in Seward, Alaska

WORKSHOP DESCRIPTION: Join educators, naturalists and researchers from the Alaska SeaLife Center and Kenai Fjords National Park to learn about activities and projects you can use to help your students understand the complicated science of climate change. Gain background information on how climate change is impacting glacial and marine ecosystems in Alaska. The workshop will include a field component (weather permitting), science labs, student activities, research presentations, and group discussions. Each participant will receive a packet filled with resources that can be used to teach students about climate change in Alaska.

FEE: A workshop fee of \$75 is due by October 30, 2009. The fee helps cover the cost of instruction, materials, and breakfast and lunch on both days. The following costs are not covered by this workshop fee: transportation to and from Seward; dinner on Saturday night; UAA credit option (see below); and lodging. This workshop is subsidized by the Ocean Alaska Science and Learning Center.

FINANCIAL ASSISTANCE / GRANTS: Five \$500 grants are available. Grant funds may be used in any of the following ways: travel to and from Seward for teachers attending this OASLC Teacher Workshop; travel to and from Seward for a group of students to visit at a later time; or costs associated with attending a program provided by Kenai Fjords National Park or the Alaska SeaLife Center. To apply for a grant, submit the OASLC Grant Application and a current resume with your workshop application. Grant applications must be received no later than October 23, 2009 at 5:00 pm. **Please Note** -- the \$75 workshop fee is required regardless of whether you receive a scholarship or a grant. Grants will be limited to one per school.

UAA CREDIT: The University of Alaska Anchorage is offering one credit for this workshop. The course number is ED 581. There will be an additional cost of \$69 to obtain credit through UAA. The credit option requires participants to submit a final project by December 11, 2009.

REGISTRATION: To register, or for more information, please contact Darin Trobaugh at the Alaska SeaLife Center:

E-mail: darint@alaskasealife.org
Phone: (907) 224-6339 or (800) 224-2525 ext. 6339

2009 Alaska Miners Association Annual Convention- Modern Mine Reclamation

Nov 2, - Nov 8, 2009
Sheraton Hotel Anchorage

Short Courses

~ November 2nd, 3rd & 7th (8:00a.m. - 5:00p.m.)

Technical Sessions

~ November 4th, 5th & 6th (8:00a.m. - 5:00p.m.)

Trade Show

~ November 4th, 5th & 6th (8:00a.m. - 5:00p.m.)

History Night

~ November 5th (7:00p.m. - 9:00p.m.)

Rock and Mineral Show

~ November 6th (5:00p.m. to 9:00pm),

~ November 7th (10:00a.m.-5:00p.m.)

~ November 8th (11:00a.m.-4:00p.m.)



Alaska Miners Association
3305 Arctic Blvd., Suite 105
Anchorage, AK 99503
Tel (907) 563-9229 / Fax (907) 563-9225
Email: ama@alaskaminers.org
Web: www.alaskaminers.org

CELEBRATE EARTH SCIENCE WEEK

OCTOBER 11-17, 2009

"Understanding Climate"

EDUCATIONAL OPPORTUNITIES

The Alaska Geological Society will be holding the following two events in conjunction with the Anchorage Public Library.

Muldoon Branch Library

Wednesday, October 14, 5:00 p.m.

Explore climate change while participating in an activity that will examine Alaska's glaciers and review sea level changes over time.

An activity for grades 4 – 8

Z. J. Loussac Public Library, Public Conference Room, level one

Friday, October 16, 2:00 p.m.

Learn about the arctic food web in a hands-on, fun-filled activity.

An activity for grades K – 4

CREATIVE OPPORTUNITIES

The **American Geological Institute** (AGI) is sponsoring the following national contests to celebrate Earth Science Week 2009.

- "People How Climate Shapes My World" is a photography contest open to all ages.
- "The Climate Where I Live" is a visual arts contest open to students in grades K-5.
- "Climate Connections" is an essay contest for students in grades 6-9. Essays of up to 300 words should highlight ways climate interacts with Earth's systems in your area.

The first-place prize for each AGI contest is \$300 and AGI's Faces of Earth DVD. The entry deadline is October 16, 2009. To learn more about these contests, including how to enter, visit

<http://www.earthsciweek.org/contests>.

The **Alaska Geological Society** (AGS) will also be awarding prizes for "Climate Connections" essays written by Alaska Students.

First prize is \$75, Second prize is \$50, and Third prize is \$25. The entry deadline is October 16, 2009. To learn more about these contests, including how to enter, visit <http://www.alaskageology.org/community.htm>.

For further information, please contact:

Jana DaSilva Lage

Phone: 907-677-7883

E-mail: jldasilva5@hotmail.com

Web: [://www.alaskageology.org/community.htm](http://www.alaskageology.org/community.htm)

NASA and Disney Parks Introduce Buzz Lightyear

NASA and Disney Parks, which collaborated to carry toy space ranger Buzz Lightyear into orbit, are launching new efforts to encourage students to pursue studies in science, technology, engineering and mathematics.

The 12-inch-tall action figure spent more than 15 months aboard the International Space Station and returned to Earth on Sept. 11. On Friday, Oct. 2, a ticker-tape parade at Walt Disney World's Magic Kingdom in Orlando, Fla., will officially welcome Lightyear home.

"Buzz's historic spaceflight is a great example of spreading the excitement of space exploration with students around the world," said Joyce Winterton, NASA's assistant administrator for Education at NASA Headquarters in Washington. "We hope our space station crews and Buzz will continue to spark student interest in the space station and its scientific potential."

NASA astronaut Mike Fincke, the station commander from October 2008 to April 2009, is spending the day at the Magic Kingdom to tell students about two new educational design challenges and a new online game.

Mission Patch Design Challenge: Students ages 6-12 will have the opportunity to design a patch to commemorate Lightyear's mission and his accomplishment of being the longest serving space ranger. The student with the most creative mission patch and 100-word essay will win a tour of NASA's Kennedy Space Center in Florida and a trip to Walt Disney World Resort. NASA will fly the winning patch into space then present it to the contest winner.

Kids in Micro-g Experiment Challenge: Students in the fifth through eighth grades are encouraged to devise experiments to be conducted aboard the space station. The 12 winning experiments will be performed by the end of the school year and videotaped for the winning schools.

For more information about the challenges, visit: <http://www.nasa.gov/buzzoniss>.