

October 14-17, 2009 Juneau, AK

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### Buried Antarctic Mountains

The International AGAP project is exploring one of the most remote areas on the Earth to determine the history and nature of the formation of a mountain that rivals the Alps, but which is buried under four kilometers of ice. The Gamburtsev Mountains were discovered by the Russian East Antarctic traverse through seismic blasting as they travelled across Dome A in the last IPY. Fifty years later through the support of six nations, two remote base camps (AGAP S and AGAP N) and nine aircraft we are back to capture images of this remarkable land feature and to learn of its origin, how it has influenced the formation of subglacial lakes, the East Antarctic Ice Sheet, and to attempt to determine where the oldest ice of the Antarctic continent may be found.

Join this adventure through the websites & blogs of the various countries - US, UK, Australia, Germany, China, Japan

Home page: <http://www.ldeo.columbia.edu/agap>

Includes education section (Blog for AGAP S camp run through Scientific American is linked to this homepage)

*British Antarctic Survey webpage & blog*

<http://agap-north.blogspot.com/>

*Australian webpage & blog*

<http://www.aad.gov.au/default.asp?casid=35373>

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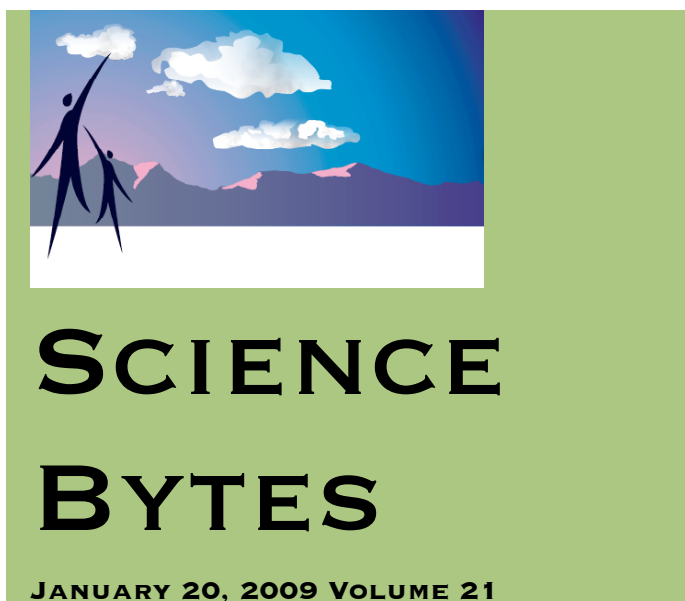
### Engaging Alaska Native Students in the Geosciences Institute

Dr. Emma Walton - instructional team leader.

May 27-30, ASD Teacher Academy, Anchorage

Secondary teachers will have the opportunity to involve themselves in an institute that will provide exciting strategies for bringing their students into the world of geosciences. Teachers will explore global climate change and its relevance to our lives in Alaska. They will investigate topics in atmospheric, earth, and ocean sciences. Nationally- recognized scientists and exemplary educators will lead these explorations.

The instructors will incorporate multi-media resources from public television's WGBH Education Foundation, which have been specifically designed for use in



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*

Alaska classrooms. WGBH provides free resources for educators on their website, Teachers Domain. This institute will feature many of the new Alaska resources that were developed to encourage Alaskan student's interest in the geosciences and to address traditional knowledge systems found in our state.

Instructors will encourage participants to become more knowledgeable about the world around them, and will offer strategies for bringing that knowledge back into the classroom. Indigenous world views and traditional knowledge systems will be featured throughout the institute.

We are especially interested in reaching teachers in districts and/or classrooms with large Alaska Native student populations. This institute is limited to 40 participants.

Twenty stipends (covering airfare, housing and per diem) are available for middle and high school teachers from rural districts who would like to attend.

Credit: Two credits will be offered free of charge to all participants who attend the institute and complete follow up work.

Go to <http://www.asdn.org> and click on "Summer Institutes" Application. The application deadline is February 15, 2009.

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### **Celebrate the Year of Science 2009**

Last week the Coalition on the Public Understanding of Science (COPUS) kicked off the Year of Science 2009 (YoS2009)—a national, yearlong, grassroots celebration of how science works, who scientists are, and why science matters.

More than 500 organizations now make up the COPUS network, and the network is growing daily. NSTA is a major sponsor of the Year of Science 2009.

For more information about COPUS and the Year of Science 2009, please visit

[www.copusproject.org](http://www.copusproject.org)

[www.yearofscience2009.org](http://www.yearofscience2009.org)

[blogs.aibs.org/copus/](http://blogs.aibs.org/copus/)

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### **Field Expeditions 2009 Graduate Courses**

Applications are now being accepted for Field Expeditions 2009 graduate courses from the Cincinnati Zoo & Botanical Garden and Miami University's Project Dragonfly - honored recently with the award for "Outstanding Service to Environmental Education" at the global level from the North American Association for Environmental Education (NAAEE).

Field Expeditions tuition-free courses offer extraordinary professional development opportunities in

Belize, Costa Rica, Trinidad, Mongolia, Thailand, Kenya and Namibia. More than 600 educators from 48 states have been accepted to Field Expeditions, some investigating cheetah conservation in Namibia, others monitoring blue-and-gold macaws in Trinidad, and still others exploring Buddhism and conservation in Thailand.

For these experiences, formal and informal educators link together with scientists, naturalists, international educators and conservationists for direct research experience at conservation hotspots throughout the world. Following the summer field research experience, educators return home to work on their own research projects -- engaging their students, colleagues, schools and communities in conservation action.

Because of support from Miami University including a waiver of all tuition and out-of-state fees, the estimated cost for these seven-hour graduate courses is \$1,150 plus airfare.

New this year from Dragonfly is the Global Field Program, a master's degree from Miami University offered entirely through tuition-waived Field Expeditions experiences worldwide with coursework in web-based learning communities. Students complete the master's part-time from anywhere in the U.S. or abroad. School administrators interested in building a collaborative partnership around the Global Field Program may reply to this email with an inquiry to Assistant Director Dr. José I. Pareja or email him directly at [parejaji@muohio.edu](mailto:parejaji@muohio.edu).

Candidates can apply for a Field Expeditions course or the Global Field Program by Wednesday, January 28, 2009, at <http://www.EarthExpeditions.org>.

In the spirit of inquiry,

The Field Expeditions/GFP Team

Miami University, Oxford, OH 45056

513.529.8576

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### **NASA Facebook Page**

NASA has a Facebook page designed for students in grades 9-12 and higher education. The page is updated daily, excluding weekends and holidays. It features information for students regarding competitions, feature articles, podcasts, videos and more. Information is also posted to update students on opportunities that have an upcoming deadline, when the space shuttle is preparing for a launch or a landing, and other significant NASA events.

Facebook members can join. Just search for NASA Students @ [www.nasa.gov](http://www.nasa.gov). Or visit

<http://www.facebook.com/home.php?#/group.php?gid=34760681199>.

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## **OPPORTUNITY: New Fellowship Program**

My name is Jennifer Carter and I am the new Director of Outreach for the Society for Science and the Public located in Washington DC. Society for Science & the Public (SSP) is a nonprofit 501(c) (3) organization dedicated to the public engagement in scientific research and education. Our vision is to promote the understanding and appreciation of science and the vital role it plays in human advancement: to inform, educate, inspire.

**Inform** - To deliver the events and news of the scientific world daily. Through online and print media, we keep the world informed of the latest scientific news and advances.

**Educate** - To further the many disciplines of science by reaching students, teachers and the public.

**Inspire** - To encourage and nurture the next generation of scientists, engineers and teachers, through our acclaimed science competitions.

In January of 2009, Society for Science and the Public (SSP) is launching a new Fellows program for high school science and/or mathematics teachers (administrators) in U.S. schools. The official announcement has not been released, but I thought since you all may know of competitive candidates, I would give you a heads up and hope that you will call or write so I can help either you complete the application or help someone you know complete the application over the next few months. I have used information off this portal before to help others so I thought that this program may benefit someone you know.

Below are some important facts about the program: All potential candidates will be ranked based on the following criteria and the most competitive, meeting all the criteria will be selected for the Fellows program for 2009. This Fellows Program in no way creates an advantage for the teacher or student who participates in Science Talent Search (STS). STS students are selected based on merit alone regardless of how they came to the program.

### **Selection Criteria:**

\*Demonstrated interest in research but actual research experience not required.

\*Have taught or actively teaching 9-12 grade science (must have teaching credentials) -If you are not actively teaching but have in the past, you must demonstrate access to students to mentor.

\*Teacher (Administrator) must be from a school that has enrollment that is at least 40% underrepresented minority and/or have at least 30% of students receiving free or reduced rate lunches

\*Demonstrated evidence of engagement with students (e.g. Field trips, science clubs, mentoring requiring time to teach, supports independent research)

\*Excellent written and oral communication skills

\*Must be able to attend Fellows Institute in Washington DC -July 27 through July 31, 2009 - fully paid trip

Each applicant must submit the following electronically:

1. Completed online application (not until Mid-January)
2. A written Essay describing the following: a 400 word description - See application guidelines for guidance on how this should be written - Methodology by which the applicant will recruit and mentor students over the commitment period. A brief description of what the teacher/school is currently engaged in recruiting and mentoring students in the production of science fair projects or project based research and the support network that is already established to support those students or if not established description of plans to establish.
3. Copy of Curriculum Vitae
4. Proposed Budget of \$ direct support funds for each year over the 1 year commitment
5. One recommendation letter from school or district administration
6. Administration should state how they will substantively support teacher's efforts.

Example:

Each teacher may be granted up to two hours of administrative leave per week, not to exceed ten hours per calendar month, to participate in the Society for Science & the Public Fellows initiative, including participating in an established mentoring program serving a school district.

"Coaches" pay

Laboratory/classroom space

Community Partnership/Co-op program

Substitute pay

There will be a significant stipend given to each teacher (up to \$8500/year) if Fellowship is awarded. The Institute may have college credit or continuing education credit awarded to it which can be used to complete a degree or certification. The commitment is for 1 year with an option of non-competitive renewal after the first year for 3 more award years.

You may know a teacher who is already making a difference with minimal resources and we want to give them the additional resources to be as effective as they can! This is going to be a great program so thanks for spreading the word if you can!

Jennifer A. Carter,

Director of Outreach

Society for Science & the Public

1719 N Street NW, Washington, D.C. 20036-2801

202.872.5140 (phone), 202.822.3922 (fax)

**FRATERNAL ORDER OF ALASKA STATE  
TROOPERS (F.O.A.S.T.)  
PRESENTS:  
2009 F.O.A.S.T. CSI Forensic Science Camp  
Sponsored by ConocoPhillips Alaska, Inc.**

**GENERAL INFORMATION:**

The F.O.A.S.T CSI Forensic Science Camp is designed to increase student awareness of science by exposure to forensics. Hands-on experience with crime scene processing gives students' direct contact with various elements of forensics, which are all science related. The camp's mission is to nurture and develop long term interest in science education and career.

**TOPICS:**

**Students 15 to 18 years old, ( 9 , 10 , 11 , and 12<sup>th</sup> Grades). June 1-5, 2009**

- Drug Analysis
- Blood Stain Pattern Analysis
- Chemical Development of Fingerprints
- DNA Collection and Analysis
- Fire Science
- Processing a Simulated Outdoor Crime Scene
- Forensic Anthropology
- Firearm and Tool Mark Analysis
- Forensic Art
- Alaska State Crime Lab Day trip

**Students 12 to 14 years old ( 6 , 7, and 8<sup>th</sup> Grades),  
June 8-12, 2009**

- Crime Scene Processing
- Trace Evidence Analysis (hair, fiber, glass and soil)
- Questioned Documents Analysis (handwriting, and ink comparisons)
- Basics of DNA
- Alaska State Crime Lab field trip
- Solving a Simulated Crime (after process the crime scene)
- Presentation on the State Crime Laboratory
- Fingerprint Rolling and Lifting
- Forensic Anthropology

Both groups will participate in a field trip to the Department of Fish and Game Shooting Range at Rabbit Creek Road and Seward Highway and the Alaska State Crime Lab on Tudor Rd..

**DATES OF CAMP:**

9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades June 1-5,2009

6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades June 8-12, 2009

**LOCATION:**

Grace Christian School, 12407 Pintail Street, Anchorage (intersection of Huffman Road and Pintail)

**CAMP FACULTY:**

*Camp Administrator:* Deborah R. Fancher, Chemistry and Biology Instructor, Grace Christian School, Anchorage.  
*Instructors:* Debbra Brewer, Biology/Physics/Forensic Science Instructor, Lumen Christi High School, Anchorage  
Leesa Wingo, Dept Chair, Instructor in Marine Biology, Forensic Science and Biology at South Anchorage High School, Anchorage.

**ADDITIONAL CAMP INFORMATION:** The camp fee includes all instruction, handouts, field trip, and a CSI t-shirt. Lunch and snacks will be furnished. There will be law enforcement speakers throughout the camp. On day five students will be "solving" their crimes.

\*\*\*The camp application can be obtained online starting January 22, 2008, at [www.alaskatroopermuseum.com](http://www.alaskatroopermuseum.com) or contact the Fraternal Order of Alaska State Troopers at 907-279-5050, E-mail [foast@gci.net](mailto:foast@gci.net).

**CAMP FEE:** \$250.00. Registration begins March 1, 2009 at 10:00 a.m. by phone or in person at the Alaska Trooper Museum, 245 W. 5<sup>th</sup> Avenue, Suite 113, Anchorage.

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**Future of Education - Chance to Participate**

A new community has been started at <http://www.FutureofEducation.com> to provide an opportunity for those who care about education to share their voices and ideas on charting the course of education in a networked world. It's a place for thoughtful discussion on an incredibly important topic. The site will launch officially at the end of the month with the start of a weekly interview series, but participation is being invited now because of an email Carol Broos (<http://www.classroom20.com/profile/beatechie>) sent out.

Carol is one of twelve teachers who have been invited to participate in a round table discussion concerning the direction of education with the new Secretary of Education Arne Duncan on Jan 21. She was sent the following questions, and is asking for feedback and ideas. You can respond either at the new <http://www.FutureofEducation.com> community or her wiki at <http://education20.pbwiki.com/FrontPage>.

Here are the questions:

1. What is the one most important education issue you wish Secretary Duncan to focus on during his tenure and why?
2. How shall the tenets of the No Child Left Behind act be altered or invigorated? What are its positives? How can

its negatives be improved?

3. How should the new administration respond to the nation's need for better prepared and more qualified teachers?

4. What should the new administration do to increase student engagement in mathematics, the sciences and the arts?

5. How should funding equity issues be addressed?

There is also a discussion topic on what questions were not asked that might have been. Thank you so much for helping Carol.

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### **Join Hurricane Hunter - Jason Dunion - Live!**

Tuesday, January 27 at 1 p.m. EST in the JASON Mission Center Win a poster signed by Jason Dunion!

You and your students can join NOAA hurricane researcher Jason Dunion live in the JASON Mission Center (JMC) Tuesday, Jan. 27 at 1 p.m. EST!

Jason is one of the lucky (and very brave) few who fly hurricane hunter aircraft directly into the eye of the storm. A Host Researcher for Operation: Monster Storms, our award-winning weather curriculum, he will appear on streaming video and answer student questions.

Your students can ask Jason about his hurricane-hunting experiences, how he became interested in science and much more. The more interesting and relevant the questions are to Jason's work, the more likely they are to be selected.

Before the session, have your students log in to the JMC to see Jason's video [<Error! Hyperlink reference not valid.>](#) . Or have them play the Storm Tracker Digital Lab [<Error! Hyperlink reference not valid.>](#) , where Jason helps them become hurricane forecasters trying to protect lives and property from monster storms.

Student questions should be submitted by Friday, Jan. 23. Students can log into the JMC and click Interactive Events, or simply click here [<Error! Hyperlink reference not valid.>](#) . We recommend questions be in video format so students can appear on-screen, but audio- or text-based questions are also accepted. Text questions may be submitted during the event.

If you have any questions about the event or how to submit student questions, please email [help@jason.org](mailto:help@jason.org).

Tell a Friend

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### **Name the Mars Science Laboratory Rover Contest**

NASA is looking for the right stuff, or in this case, the right name for the next Mars rover. NASA, in cooperation with Walt Disney Studios Motion Pictures' movie WALL-E from Pixar Animation Studios, is conducting a naming contest for its car-sized Mars Science

Laboratory rover that is scheduled for launch in 2011.

The contest is open to students 5-18 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. Essays must be received by Jan. 25, 2009. 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.

Disney will provide prizes to students submitting winning essays, including a trip to NASA's Jet Propulsion Laboratory in Pasadena, Calif., where the rover is under construction. The grand prize winner will have an opportunity to place a signature on the spacecraft and take part in the history of space exploration. For more information, visit <http://marsrovername.jpl.nasa.gov/>.

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### **2009 Thacher Scholars Awards**

The Institute for Global Environmental Strategies is currently accepting entries for the 2009 Thacher Scholars Awards. The awards will be given to students in grades 9-12 who demonstrate the best use of geospatial technologies or data to study Earth. Eligible geospatial tools and data include satellite remote sensing, aerial photography, geographic information systems and Global Positioning System. The main focus of the project must be on the application of the geospatial tool(s) or data to study a problem related to the Earth's environment.

Applicants must be U.S. citizens currently in grades 9-12. Students in public, private, parochial, Native American reservation and home schools are eligible. Entries can be submitted by individuals or teams.

Cash awards will be given to students who place in the top three. First, second and third place will receive \$2,000, \$1,000 and \$500, respectively. Teachers or adult "coaches" of winning entrants will receive a \$200 gift card.

Entries must be postmarked by April 6, 2009. Entries may also be submitted electronically. For more information, visit [www.strategies.org/ThacherScholars](http://www.strategies.org/ThacherScholars). Please email any questions about this opportunity to [ThacherScholars@strategies.org](mailto:ThacherScholars@strategies.org).

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### **Recess at 20 Below and Science?**

It doesn't sound like a match, but really, there is a tremendous amount of science and math when learning about the cold. Sometimes it can be difficult to connect science concepts students with everyday life. Yet, when incorporated with a fun, colorful, easy to read book such

as Recess at 20 Below, concepts are better understood. Why are the winters dark? Why do ice crystals fall out of the air at extremely low temperatures? What is ice fog? Why do ravens attack red Kool-Aid on the snow? How many degrees colder is negative 20 than positive 40? Can you get too hot at 20 below zero? These are typical questions students ask after a Recess at 20 Below presentation. Student led questioning provides great opportunities for science lessons that put kids into the picture.

Recess at 20 Below is more than just reading and writing. It's a story that blends all areas of the curriculum, including the sciences. The power of this book has been recognized nationally. It is used by the Heinemann Company in their kits for elementary schools; by the State of Ohio in their standardized tests; by the State of Kentucky in their recommended acquisitions list; and by others as well.

Author and photographer Cindy Lou Aillaud has given exciting and inspirational school presentations across Alaska and numerous states Outside. Aillaud is an USA Today teacher, a Fulbright Memorial Fund Scholar, a Disney Honoree and an Alaska Physical Education teacher of the year. She knows how to interact with kids to bring out their best. After a day with Aillaud, school ends with smiles and hugs. Aillaud can be contacted at [smiles99737@yahoo.com](mailto:smiles99737@yahoo.com) for further information.

More Info... <http://news.space-explorers.com/?v=7=1=2>  
<<http://news.space-explorers.com/?v=7&i=1&a=2>>

### **NASA'S FERMI TELESCOPE UNVEILS A DOZEN NEW PULSARS**

NASA's Fermi Gamma-ray Space Telescope has discovered 12 new gamma-ray-only pulsars and has detected gamma-ray pulses from 18 others. The finds are transforming our understanding of how these stellar cinders work.

More Info... <http://news.space-explorers.com/?v=7=1=3>  
<<http://news.space-explorers.com/?v=7&i=1&a=3>>

### **NEW NASA BALLOON SUCCESSFULLY FLIGHT-TESTED OVER ANTARCTICA**

NASA and the National Science Foundation have successfully launched and demonstrated a newly designed super pressure balloon prototype that may enable a new era of high-altitude scientific research. The super-pressure balloon ultimately will carry large scientific experiments to the brink of space for 100 days or more.

More Info... <http://news.space-explorers.com/?v=7=1=4>  
<<http://news.space-explorers.com/?v=7&i=1&a=4>>

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### **from the SPACE EXPLORERS, INC., PLANETARY TIMES**

#### **DEAD STARS TELL STORY OF PLANET BIRTH**

Astronomers have turned to an unexpected place to study the evolution of planets -- dead stars. Observations made with NASA's Spitzer Space Telescope reveal six dead "white dwarf" stars littered with the remains of shredded asteroids. This might sound pretty bleak, but it turns out the chewed-up asteroids are teaching astronomers about the building materials of planets around other stars.

More Info... <http://news.space-explorers.com/?v=7=1=1>  
<<http://news.space-explorers.com/?v=7&i=1&a=1>>

#### **HUBBLE FINDS STARS THAT 'GO BALLISTIC'**

Some stars go ballistic, racing through interstellar space like bullets and tearing through clouds of gas. Images from NASA's Hubble Space Telescope, taken by Raghendra Sahai of NASA's Jet Propulsion Laboratory, Pasadena, California, and colleagues reveal 14 of these young, runaway stars.