



# SCIENCE BYTES

APRIL 27, 2009 VOLUME 34

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:

**2009 - Alaska Math & Science Conference**

**INQUIRY - The Bridge to Understanding**

October 14-17, 2009 Juneau, AK

**NSTA Conferences 2009-2010**

## Professional Development Opportunities in Denali National Park!

The Murie Science and Learning Center invites you to participate in one of our exciting summer seminars. Earn one professional development credit from the University of Alaska while immersing yourself in:

### Field Seminars

**June 8 - 10: High Country Wildflowers for Beginners**  
<<http://www.murieslc.org/static/1238/high-country-wildflowers-field-seminar>> with Verna Pratt

**June 12 - 14: High Country Wildflowers: A Closer Look**

<<http://www.murieslc.org/static/1239/high-country-wildflowers-closer-look-field-seminar>> with Verna Pratt

**June 15 - 17: Knowledge informs Art: Drawing inspiration from Denali**

<<http://www.murieslc.org/static/1241/knowledge-informs-art-drawing-inspiration-from-denali-field-seminar>> with Karin Franzen

**June 26 - 28: Dall Sheep and their Predators**

<<http://www.murieslc.org/static/1243/dall-sheep-and-their-predators-field-seminar>> with Ken Whitten

**July 3 - 5: Wildlife Tracking and Signs**

<<http://www.murieslc.org/static/1246/wildlife-tracking-field-seminar>> with Tim Buechle

**July 24 - 26: The Science of Fly-Fishing**

<<http://www.murieslc.org/static/1248/science-of-fly-fishing-field-seminar>> with Shann Jones

**Jul 31 - Aug 2: Pioneers of Denali: the Creation of Mt. McKinley National Park**

<<http://www.murieslc.org/static/1249/pioneers-of-denali-the-creation-of-mt-mckinley-national-park-field-seminar>> with Tom Walker

**August 7 - 9: Denali Field Journaling**

<<http://www.murieslc.org/static/1250/denali-field-journaling-seminar>> with Tom Walker

**August 28 - 30: The Turning Tundra: How Plants and Animals Prepare for Winter**

<<http://www.murieslc.org/static/1253/the-turning-tundra-a-field-seminar>> with Nan Eagleson

### Seminars for Families

**Jun 29 - Jul 2: Denali Dinosaurs**

<<http://www.murieslc.org/static/1531/denali-dinosaurs-a-family-seminar-june-29-july-1>> for Ages 8 and Older

**August 14 - 16: Denali Wildlife**

<<http://www.murieslc.org/static/1247/denali-wildlife-a-family-seminar>> for Ages 8 and Younger

### Teacher Trainings - just for you!

**July 6 - 8: Subarctic Science, Sustainability and Students: Building Bridges**

<<http://www.murieslc.org/static/1236/subarctic-science-sustainability-and-students-building-bridges>> with Kristen Friesen

**July 20 - 22: The World of Wolves**

<<http://www.murieslc.org/static/528/world-of-wolves-teacher-training>> with Kristen Friesen

### Courses include:

v Small group size of 10 participants.

v Staying at a field camp

<<http://www.murieslc.org/static/1258/field-camp-accomm>

odations> located 29 miles inside Denali National Park along the Teklanika River.

v All meals, accommodations, transportation, and instruction.

v 10% discount available to members of Alaska Geographic.

**For more information or to register:**

v go to [www.murieslc.org](http://www.murieslc.org), or click on the links above

v email [courses@murieslc.org](mailto:courses@murieslc.org)

v call 1-888-688-1269.

Courses offered by Alaska Geographic through the Murie Science and Learning Center at Denali National Park and Preserve.

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**DEED Seeks Content Support Specialists**

The Department of Education & Early Development is seeking content support specialists to provide districts with specialized support services as needed in language arts, visual arts, performing arts, counseling, cultural standards, health and physical education, mathematics, parent engagement, reading, science, social studies, employability/career technology, instructional technology, networking technology, and world languages.

The objective is to help districts build their capacity to address content area supports necessary to increase student achievement. Content support specialists can expect to work between 40-60 days (dependent upon district needs) and/or serve as a member of an on-call talent bank providing services to districts on a limited basis.

Applications are due by 4 p.m. on May 1; contact Amelia Ludeman at 907-465-8706 or [amelia.ludeman@alaska.gov](mailto:amelia.ludeman@alaska.gov) <<mailto:amelia.ludeman@alaska.gov>> to request an application.

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**Founder of Native Engineering Program is Honored**

Dr. Herb Schroeder, founder and executive director of the Alaska Native Science & Engineering Program, has won the 2009 Founder's Award of the National Action Council for Minorities in Engineering.

The award includes \$10,000 to be given to a non-profit of Dr. Schroeder's choice.

Dr. Schroeder started ANSEP in 1995 with one engineering student. ANSEP works with students from the time they are high school sophomores in high school through graduate school. It is designed to increase university recruitment and retention rates through hands-on high school outreach initiatives, rigorous summer bridging programs, focused academic learning communities, or-

ganized student cohorts, networks of peer and professional mentors, community-based learning, professional internships, undergraduate research projects, and graduate school programs.

In 2001, Dr. Schroeder led the formation of the Pacific Alliance with the goal of replicating ANSEP at the University of Alaska Fairbanks, the University of Hawai'i Manoa and the University of Washington. The Alliance was recently expanded to include South Dakota School of Mines and Technology, University of Colorado at Boulder, University of Idaho and University of North Dakota. ANSEP and the Pacific Alliance are national models for recruitment and retention programs.

For more information about NACME, visit

<http://www.nacme.org/about/>

<<http://www.nacme.org/about/>> . For more information about ANSEP, visit <http://ansep.uaa.alaska.edu>

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**Checkout the NASA Sun-Earth Day Facebook Page**

We are always looking for ways to get connected so we can all learn about the discoveries of the Sun. We like to keep you informed whenever we add something new. Our team has added a Sun Earth Day Facebook section. Let us know how you use the Sun Earth Day resources!

We encourage you to take a look at our new Sun-Earth Day Facebook page! With this resource we can keep you up to date on the latest developments, events, website additions, activities, podcasts and ideas! It's also a great place to find out what everyone else in the community is doing. It's also a quick and easy place for you to share your ideas, thoughts and feedback with us.

If you're not familiar with Facebook, this is the basic definition: Facebook is a free-access social networking website where users can join networks organized by city, workplace, school, and region to connect and interact with other people. People can also add friends and send them messages, and update their personal profiles to notify friends about themselves.

You can access the Nasa Sun-Earth Day Facebook page from the homepage of the Sun-Earth Day website at <http://sunearthday.nasa.gov> or by simply going to <http://www.facebook.com/profile.php?id=1529822880>

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**NASA's Digital Learning Network**

NASA's Digital Learning Network presents a series of videoconferences to assist educators in staying current on NASA education resources and related products.

During each event, product producers, authors and experts will demonstrate their materials designed to opti-

mize awareness and understanding of science concepts. Instructional objectives, accessing the materials and primary contacts for the materials will also be discussed. During the videoconferences, participants will be able to submit questions to the presenter that will be addressed during the presentation.

The following topics will be covered:

**Meteorology: An Educators Resource Guide for Inquiry-Based Learning: April 29, 2009, 4-5 p.m. EST**

Meteorology is one of the oldest observational sciences in human history and perhaps the most relevant to a broad segment of society. Learn how the first early meteorologists used this knowledge for their success and survival. This educator guide covers weather patterns, climate and measurement tools.

**NASA Explores Virtual Worlds: May 27, 2009, 4-5 p.m. EST**

Virtual immersive environments are increasing in popularity in modern America. Explore the virtual world that NASA education is building in Second Life and learn how to become an active citizen of this world.

For more information about these videoconferences and to sign up online, visit <http://dln.nasa.gov/dln/content/webcast/>. Questions about these events should be directed to Caryn Long at [caryn.long@nasa.gov](mailto:caryn.long@nasa.gov).

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**Creek Cleanup Help Needed**

Creek Cleanup 2009 is Saturday, May 9th. We need Honchos for two locations; Taku Lake and Cheney Lake. Taku is on the corner of King street and 76th near Diamond Blvd. and Cheney is near Northern Lights and Baxter. Honchos committ to check-in volunteers and hand out supplies from 8:45am on May 9th to noon and then return supplies to Valley of the Moon park at noon. If you are interested in helping out as a honcho at either location please contact us by email at [creekcleanup@anchoragecreeks.org](mailto:creekcleanup@anchoragecreeks.org)

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**ASDSA Science Offerings - HURRY**

**ASDSA-09-A: UAA: ED 565.416, Integrating Technology into Science Curriculum (Secondary), 1 Credit**

Target Audience: ASD Certified Teachers

Course Instructors: Craig Kasemodel and Chuck Blaney

*Course Description:* This course provides introductory knowledge regarding the integration of technology into the Science curriculum. Instructors who are curriculum area experts will partner with instructors who are educational technology experts to provide information and resources that support relevant teaching and learning for the

21st century. Specifically, teachers will learn how to use current technologies to enhance student learning in the content area, as guided by National Educational Technology Standards, ASD Technology Frameworks, and curriculum Grade Level Expectations (GLEs) or standards.

**ASDSA-09-A: UAA: ED 575.402, Teaching Science with Art, 1 Credit**

Target Audience: K-12 Teachers

Course Instructor: Susan Barstow

*Course Description:* Both scientists and artists are inquisitive observers of nature who spend their lives trying to make sense of the world from various perspectives. Student learning is all about the construction of connections within the brain. We know the powerful instructional strategy of teaching using analogies to build these connections. Participants will do art projects that are linked to the Alaska GLEs and national science/art standards. The course will emphasize scientific inquiry skills using art as a medium. Come and join in an exciting, fun way to connect these two incredible fields of study.

**ASDSA-09-AB: UAA: ED 580.403, Indigenous and Western Science Observations on Climate Change: Resources for Teachers, 2 credits, ASD Science Teachers Only - 2 spaces left!**

Target Audience: ASD K-12 Science Educators

Course Instructor: Emma Walton

*Course Description:* Increase your content knowledge using active learning and hands-on exploration with scientists and indigenous experts engaged in climate change research, Learn place-based strategies to make content more meaningful to your students. Explore the interaction between western and Alaska Native ways of knowing; see how they complement and intersect on climate change issues. Investigate strategies and resources for incorporating indigenous world views into the science classroom. Discover new, high-quality, free online resources to augment your lessons and engage visual learners. Find out about the explosion in Alaska-focused climate change and resources that are available to classroom teachers. Field Trips! We will be on the move so that you can gain ideas for meaningful outdoor exploration with your students in your own backyard. Have a chance to put it all together. Discuss content, cultural competency and new classroom resources with your colleagues. Share ideas for inquiry-based lesson plans, place-based exploration, and strategies for encouraging Alaska Native students engagement in the geosciences.

**ASDSA-09-B: UAA: ED 580.402, Science Student Arrival and Departures: Successful Strategies to Prepare Students for Engagement & Reflection in Science, 1 Credit**

Target Audience: Educators Grades 4-12

Course Instructor: Susan Barstow

*Course Description:* The purpose of this course is to share and create activities that will get your science students' attention at the beginning of each class and have them reflecting on their learning when they leave class. The focus will be on engaging the learner, accessing prior knowledge, and student metacognition (evaluation).

**ASDSA-09-B: UAA: ED 580.406, Advanced FOSS Science Institute-including FOSS/ASK (Assessing Student Knowledge) Project: Using Effective Writing and Formative Assessment Strategies, 1 Credit**

Target Audience: Educators grades 3-8

Course Instructor: Christine Sheridan

*Course Description:* Presentation by Dr. Kenneth Wesson on Brain Research and Learning. Participants engaging in science investigations using effective research based strategies related to science inquiry and writing in science notebooks. Effective Assessment Strategies will focus on using formative assessment to improve teaching and learning. The presentation will feature the new assessment tools and strategies developed in the ASK project (Assessing Science Knowledge). This session will be of particular interest to teachers, curriculum coordinators, professors and professional development specialists. Sample assessment materials (valued at approximately \$100 per participant) developed specifically for FOSS grades 3-6 will be distributed.

**ASDSA-09-C: UAA: ED 580.401, AMEREF: Minerals & Energy Education Resources for Alaska Educators, 1 Credit**

Target Audience: K-12 Educators

Course Instructor: Leland A. Clune

*Course Description:* This course is designed to provide instruction methodology and techniques for educators and how to incorporate activities that teach K-12 students about Alaska's mineral, energy, and forest natural resources. This workshop on Minerals and Energy Education features hands-on activities, guest speakers, and local field trip opportunities. Participants will familiarize themselves with the Alaska Resources Kit: Mineral, Energy & Forestry, sample activities, and identify human and material resources within their local community and region.

**ASDSA-09-C: UAA: ED 580.404, Alaska Boreal Forest, 1 credit**

Target Audience: Teachers 6-12

Course Instructor: Matt Weaver

*Course Description:* This course will provide participants with knowledge of the identifying, economic, and ecological characteristics of the major biotic and abiotic elements comprising the Boreal Forest. Participants will learn field based forest and freshwater assessment and sampling techniques as well experience lessons from several different Project Learning Tree, Project Wild, and Fire in Alaska curriculum guides.

**ASDSA-09-D: UAA: ED 555.411, Lang Arts, SEL, Math, Science, Physical Education: Standards Based Assessing and Reporting 2009, By Invite only, 1 Credit**

Target Audience: Current ASD/Standards Based Assessing and Reporting (SBAR) pilot teachers.

Course Instructors: Mardell Kiesel, Trisha Herminghaus.

*Course Description:* Participants will develop strategies to integrate standards based assessments into their regular classroom practice and to use resulting data as a tool for guiding instruction and communicating with students and parents. In groups, participants will create assessment maps by content area that align Grade Level Expectations and current adopted curriculum. Additionally, guidance will be provided to write sample assessment tasks for each content area and grade level.

**ASDSA-09-D: UAA: ED 580.405, Global Learning and Observations to Benefit the Environment (GLOBE), 1 credit**

Target Audience: Science teachers, grades 7-12

Course Instructor: Gail Raymond

*Course Description:* The GLOBE program is an international environmental science and education program. Secondary students and their teachers work with scientists in studying their local environment and earth systems. Workshop instruction covers standardized scientific measurements/protocols and learning activities that support science concept development in the areas of atmosphere, hydrology, land cover, biology, soils, global positioning system and phenology. Teachers receive educational materials including the GLOBE Teacher's Guidebook that cover protocols and learning activities that can be taught in a variety of subjects. Protocols and activities are aligned with state and national science standards and are inquiry-based. GLOBE develops many science concepts and facilitates practice in science skills such as observation, recording, predicting, inferring, cooperation, analysis of data, and communication. Use of computers in

enhancing learning in the classroom is also an important component.

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**Garden Tours**

Friday evening tours at Tryck Gardens begin

May 15th - Spring Flowering Plants

May 22nd - Early flowering Rhododendron and other early flowering shrubs.

Please call 345-2507 for reservations and instructions for parking, times, etc.

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