



SCIENCE BYTES

AUGUST 31, 2009 VOLUME 4

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

March 17-20, 2010 Philadelphia, PA

Alaska State Science & Engineering Fair

March 26-28, 2010 Begich Middle School

New NASA Opportunities and Resources

NASA has new and exciting opportunities and resources available as you and your students head back to school. Click below...

<http://www.nasa.gov/audience/foreducators/blast-back-to-school.html>

Climate Discovery Online Courses for Educators

Now accepting registrations for fall Term!

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

Are you seeking a K-12 professional development opportunity that will enhance your qualifications, competency, and self-confidence in integrating Earth system science, climate, and global change into your science classroom? The National Center for Atmospheric Research (NCAR) offers a series of six and seven week on-line courses for middle and high school teachers that combine geoscience content, information about current climate research, easy to implement hands-on activities, and group discussion. The courses run concurrently from Sept 18 through November 8, 2009.

• **CD 501 Introduction to Earth's Climate** is designed to guide participants through the basics of climate science, integrating content, classroom activities, and community-building discussions to help middle and high school educators understand the answers to common questions about climate.

• **CD 502 Earth System Science: A Climate Change Perspective** explores Earth as a system from the perspective of climate and global change, describing the interactions between the various parts of the Earth system, including human activities, and how they all affect our climate.

• **CD 503 Understanding Climate Change Today** presents some of the current and predicted impacts of global warming on our planet and human societies. This course explores how climate models are developed and used to understand likely scenarios of future climate and how current scientific research is improving the quality of climate predictions.

There is a \$225 fee per course (save \$25 if you register by Sept 1st.) For complete course schedule and registration information, visit <http://ecourses.ncar.ucar.edu>

For questions or comments, please contact Kirsten Meymaris at kirstenm@ucar.edu

Teaching the Process of Science - Website

http://serc.carleton.edu/sp/process_of_science/index.html

KidWind - Innovative Energy Education - Website

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

Calling All K-12 Science Teachers: Toyota TAPESTRY Program Now Accepting Entries for the 20th Annual Science Grant Competition

The Toyota TAPESTRY Grants for Science Teachers program, sponsored by Toyota Motor Sales, U.S.A., Inc., and administered by NSTA, is now accepting entries for the 2009-2010 competition. Now in its 20th year, the

program offers grants up to \$10,000 to K–12 science teachers for innovative projects that enhance science education in their school and/or school district over a one-year period.

Fifty large grants and a minimum of 20 mini-grants totaling \$550,000 will be awarded this year. Individual science teachers or a team of up to five teachers can submit proposals in one of three categories: physical science application; environmental science education; and integrating literacy and science. A judging panel convened by the NSTA will select the award-winning projects based on several criteria, including their innovative approach in teaching science and ability to create a stimulating and hands-on learning environment.

Since the program's inception in 1990, Toyota TAPESTRY grants totaling more than \$8.6 million have been awarded to science teachers across the country. More than 2,000 teachers have used those funds to develop and execute extraordinary programs that helped hundreds of thousands of students nationwide make a passionate connection with science.

For more information about the Toyota TAPESTRY Grants for Science Teachers program or to learn how to apply, visit www.nsta.org/pd/tapestry. Applications must be submitted no later than **January 18, 2010** to be considered. Don't delay, apply now!

United Nations International Youth Day Serves as Kick-Off Site for Siemens We Can Change the World Challenge

Year two of the *Siemens We Can Change the World Challenge* kicked off on Wednesday, August 12, 2009, in connection with the United Nations International Youth Day in New York City. The grand prize-winning team from the inaugural year of the challenge, Team Dead Weight from West Branch, Iowa, presented their project—about the environmental hazards of lead wheel weights in tires—to an audience of peers, UN representatives, and media as part of the day's theme, "Sustainability: Our Challenge. Our Future."

NSTA, the Siemens Foundation, and Discovery Education are partnering again this year to educate, empower and engage students and teachers nationwide to become "Agents of Change" in improving their communities through the *Siemens We Can Change the World Challenge*. The second year of this national sustainability challenge—now expanded to include elementary school students—encourages students in kindergarten through eighth grade to team up with their classmates to create replicable solutions to environmental issues in their *classroom* (grades K–2), *school* (grades 3–5) and *community* (grades 6–8).

For more information, and to register for the challenge, which officially opens for entries on August 19, 2009, go to www.wecanchange.com.

Earth Science Week - October 11-17, 2009 - Contests

Earth Science Week 2009 Photography Contest -- Open to All Ages

The American Geological Society is sponsoring a photography contest to celebrate Earth Science Week 2009. Photographs should focus on the topic "How Climate Shapes My World." The contest is open to any resident of the United States. Participants should submit a picture that best represents the climate in their area. Entries may be submitted electronically or by mail. Only one entry will be accepted per person. The deadline for submitting photos is **Oct. 16, 2009**.

<http://www.earthsciweek.org/contests/photography/index.html>

Earth Science Week 2009 Visual Arts Contest -- Open to Students in Grades K-5

The American Geological Society is sponsoring a visual arts contest to celebrate Earth Science Week 2009. Artwork should focus on the topic "The Climate Where I Live." The contest is open to students in grades K-5 who are residents of the United States. Participants should submit an original two-dimensional visual arts project that best represents the climate in their area. Entries must be submitted by mail. The deadline for submitting entries is **Oct. 16, 2009**.

<http://www.earthsciweek.org/contests/visualarts/index.html>

Earth Science Week 2009 Essay Contest -- Open to Students in Grades 6-9

The American Geological Society is sponsoring an essay contest to celebrate Earth Science Week 2009. Essays should focus on the theme "Climate Connects." The contest is open to students in grades 6-9 who are residents of the United States. Participants should submit an original essay no more than 300 words in length, typed, and formatted to fit on one page. Entries may be submitted electronically or by mail. The deadline for submitting entries is **Oct. 16, 2009**.

<http://www.earthsciweek.org/contests/essay/index.html>

International Year of Planet Earth & Earth Science Week 2009 Photography Contest -- Open to All Ages

To celebrate the International Year of Planet Earth and Earth Science Week 2009, the American Geological Institute is sponsoring a major international photography contest. Photographs should focus on the topic "Exploring Earth Science Around the World." The contest is open to anyone of any age from anywhere around the world. Entries must be submitted electronically. The deadline for submitting photos is **Oct. 16, 2009**.

<http://www.earthsciweek.org/contests/iypephotocontest/index.html>

Top Star - Using NASA's Hubble Space Telescope to Teach

Do you think you're a Top Star? Would you like to be recognized for all the time and effort you put into your lesson plans? U.S. formal (K-12, college) and informal educators are invited to submit their best examples of how they incorporate information from NASA's Hubble Space Telescope to teach science, technology, engineering and mathematics education. Those selected as "Top Stars" and "Gold Stars" will receive national recognition and awards.

Top Stars will be selected periodically during the 2009-2010 school year. Entries will be accepted through **Jan. 2, 2010**. The deadline for the current submission period is **Aug. 30, 2009**.

For more information, visit <http://topstars.strategies.org>. Questions about this opportunity should be directed to topstars@strategies.org.

from Anchorage Waterways Council

Help Us Find A Home For Our Ducks While Helping Our Creeks!

As you know the Great Alaska Duck Race and end-of-summer Creek Festival will be at the Peanut Farm on September 12th from 1 pm to 5 pm with the Duck Race starting at 2 pm. We greatly need volunteers to help us with the following tasks:

- * Duck adoptions at REI this weekend (Aug. 29th & 30th) and Labor Day weekend (Sept. 5th, 6th & 7th)

- * A duck tagging crew on September 8th & 9th from 6-8 pm at Odom Corporations's Warehouse on Ship Ave. (pizza and soda provided)

- * Race monitors to protect the stream bank along the race course, assist with duck retrieval, take photos and video, etc. on race day

Please email Cherie Northon at

cherie@anchoragecreeks.org or call her at 561-4627 if you can help.

Adopt A Duck!

Adoption sites are the Peanut Farm (anytime) and REI this weekend and next. Adoption forms are currently available at Amsterdam Cafe and Great Harvest Bread. Please check our website at www.anchoragecreeks.org for other locations. Adopt one or more ducks and know that you're helping our creeks!

Coexisting With Beavers

On Monday, August 31, AWC and the Alaska Department of Fish and Game are hosting a free presentation by Owen and Sharon Brown of Beavers, Wetlands, and Wildlife (www.beaversww.org), a non-profit that is dedicated to educating the public about lasting and peaceful solutions for human/beaver conflicts. It will be held at Inlet View School's Multipurpose Room (1219 N St.)

from 6:30-8:00 pm, and will be followed by a field trip to Westchester Lagoon to view beaver habitat.

Volunteers Needed for Education Event

The Anchorage Waterways Council needs instructors for the Macroinvertebrate Collection Station at the 2009 Water Discovery Days. This event runs from September 9th to the 11th at the Campbell Creek Science Center, and we need volunteers to cover two shifts a day (8:30-12 and 12-3:30) for all three days. You'll be teaching 4th graders all about macroinvertebrates and how important they are to our watersheds. The AWC will provide the training needed for you to have a great time with these enthusiastic kids. Contact Holly Kent at 272-7335, ext. 1, or holly@anchoragecreeks.org for more information.

Water Quality Monitor Training

Come "Test the Waters" with the Anchorage Waterways Council. The AWC has a citizen-based water quality monitoring program that provides the longest running baseline data on Anchorage's creeks and streams and also serves as the eyes and ears of local waterways in response to pollution events. If you enjoy the outdoors and benefit from the waterways in Anchorage, consider giving back by joining our team of dedicated water quality monitors. Free training will be held on Thursday, October 1st (5 pm-9 pm) and Saturday, October 3rd (9 am-4 pm). Registration required, please call 27-CREEK (272-7335, ext. 2) and ask for Kate or email her at kate@anchoragecreeks.org to receive more information or visit our website at www.anchoragecreeks.org.

PolarTREC Accepting Applications for 2010-2011

PolarTREC (Teachers and Researchers Exploring and Collaborating) is currently accepting applications from teachers for the fourth year of teacher research experiences. Teachers are invited to submit an application to participate in field research learning experiences during the 2010 (Arctic) or 2010-2011 (Antarctic) field seasons. More information and application forms are available at: <http://www.polar trec.com>

IMPORTANT! Funding is pending for PolarTREC during the 2010 arctic field season and the 2010-2011 Antarctic field season. ARCUS will keep applicants informed of our funding status. If funding is secured, final matches should be made in January 2010.

ABOUT PolarTREC:

PolarTREC - a program of the Arctic Research Consortium of the U.S. (ARCUS) - pairs K-12 teachers with researchers for professional development through authentic polar research experiences. The program integrates research and education to produce a legacy of long-term teacher-researcher collaborations, improved teacher content knowledge, and broad public interest and engagement in polar science.

The program integrates research and education to produce a legacy of long-term teacher-researcher collaborations, improved teacher content knowledge, and broad public interest and engagement in polar science. Through PolarTREC, teachers will spend two to six weeks in the Arctic or Antarctic, working closely with researchers in the field as an integral part of the science team. PolarTREC teachers and researchers will be matched based on similar goals and interests and teachers will be trained to meet the program requirements prior to the field season. While in the field, teachers and researchers will communicate extensively with their colleagues, communities, and students of all ages across the globe, using a variety of tools including satellite phones, online journals, podcasts, and live events and web-based seminars. Teachers and research projects will be selected and matched to fill the openings available. All major expenses associated with teacher participation in PolarTREC field experiences are covered by the program, including transportation to and from the field site, food, lodging, and substitute teacher costs.

APPLICATION DEADLINE

Teacher Application Deadline: Monday, 5 October 2009

POLARTREC INFORMATIONAL WEBINAR

Interested teachers are encouraged to participate in a PolarTREC informational webinar (web conference), scheduled for Tuesday, 8 September 2009 at 2:30 p.m. Alaska Daylight Time (12:30 p.m. HDT, 3:30p.m. PDT; 4:30 p.m. MDT; 5:30 p.m. CDT; 6:30 p.m. EDT).

An online webinar registration form is available at: <http://www.polartrec.com/join/informational-webinar/form> Instructions will be sent to all registered participants. Participation in the webinar is free, optional, and is not a prerequisite for applying to the PolarTREC program.

ADDITIONAL INFORMATION

More information about PolarTREC, including program goals, requirements, expectations, and frequently asked questions, is available at: <http://www.polartrec.com>
 Email: info@polartrec.com
 Phone: 907-474-1600

**Household Physics
for fun and
Entertainment**



Physics is a hands on science. It shows how the real world works. Dr. Elwood Schapansky, retired professor of physics from Santa Barbara City College, and eight year Talkeetna resident, will present a show of basic physics in the Sheldon Community Arts Hangar in Talkeetna, on Sept 4, 2009, at 7:00 PM. Doors will open at 6:30 PM. Dr. Schapansky has spent much time, during his retirement from teaching, promoting hands on experience in the sciences. He presents primarily to the teachers and students of the fourth, fifth and sixth grades.

The presentation at the Arts Hangar is something new, and is a throwback to years ago when science was a parlor activity for fun, education and entertainment. This show is an experiment to see if others share his desire to balance the move toward virtual experiences that are now the craze. His teaching experiences in college level physics labs have shown that students no longer have the confidence, dexterity and skill to do hands on experiments easily. It is his hope that parents will make more of an effort to provide manual activities and basic science education to their children.

The Friday show will be based entirely on demonstration items that he finds in his personal workshop. Torches, hammers, crowbars, bicycle wheels, batteries, wires, cameras, pulleys, cans, boards, homemade tops, and gyroscopes will be used. There may be a few surprises. This is a hands on show, in a virtual world!

**Exciting Free Credit Opportunity Fire in Alaska
Ed 580 R (1 Graded credit) October 23 4:30-8:00
October 24 8:30-4:30**

**West High School
Tuition- Free – sponsored by AK Division of Forestry/BLM
Materials fee- \$ 20.00
Audience-
Teachers (especially, but not limited to grades 4-10)
Aides
Home schooling parents
Scout leaders
Anyone interested in Wildland Fire Ecology
Wildland Fire Behavior
Wildland Fire Safety**

Fire in Alaska is a hands on, interactive, lab based course designed to help young people learn about fire ecology, fire behavior, and about living safely along the wildland urban interface. The lessons, which **use role playing, games, and laboratory simulations**, can be taught individually or combined into units. Participants have access to a trunk filled with posters, videos, and equipment to perform experiments. This exciting fire curriculum is being used all over Alaska.

Join us !

Limit 20 participants-First come/first served
**To register or for more info: Contact Matt Weaver
Matt.Weaver@alaska.gov 761-6233**

**Project Learning Tree & Project WILD
Credit Class**

November 6-7, 2009

You have been hearing about this !!!

Who: Teachers, home school parents, scout leaders and camp counselors are welcome to attend this educator's workshop.

What: Project WILD and Project Learning Tree are hands-on, interdisciplinary, supplementary activities that focus on environmental conservation. Through wildlife and the forest, students learn concepts and gain skills in core subject areas. These workshops are fun !

What else: These are action-packed days filled with activities. Participants receive activity guides and additional support materials. Correlation guides to the Alaska State Content Standards are available.

Credit: Graduate credit is available through UAA, but not required for participation in these workshops. The credit cost is \$94. Course # ED 580Q.

Where: Romig Middle

When: **Fri Nov 6 4:30-8:00**
Sat Nov 7 8:30-4:30

Cost: \$ 94 to UAA/ \$ 30 to ANROE

How: **Registration required. Email Matt Weaver**

Matt.weaver@alaska.gov matt (dot) weaver at Alaska (dot) gov

Questions: For information on workshop content, call 761-6233
