



# SCIENCE BYTES

OCTOBER 28, 2008 VOLUME 11

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**

##### **NSTA Regional Conferences – 2008**

November – Portland, OR: November 20-22, 2008

December – Cincinnati, OH: December 4-6, 2008

##### **2009 National NSTA Conference**

New Orleans, LA – March 19-22, 2009

##### **Science Fair 2008-09**

##### **Alaska Science and Engineering Fair**

March 27-29, 2008 Looking for volunteers for the SF Board.

##### **Science Olympiad 2008-09**

**April 4, 2009 @ Begich Middle School**

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#### **APPLY NOW FOR THE 2009-10 ALBERT EINSTEIN DISTINGUISHED EDUCATOR FELLOWSHIP PROGRAM**

Attention K-12 teachers: Are you an experienced educator who is ready to make a difference on a national

scale? If so, consider applying for an Albert Einstein Distinguished Educator Fellowship and prepare for a year of unique opportunities. As an Einstein Fellow you will spend a school year in Washington, DC sharing your expertise with policy makers. You may serve your Fellowship with Congress or one of several government agencies such as the Department of Energy, NASA, the National Science Foundation, the National Institutes of Health, the National Oceanic and Atmospheric Administration, or the National Institute of Standards and Technology.

The goal of the Einstein Fellows program is to provide an opportunity for teachers to inform national policy and improve communication between the K-12 STEM education community and national leaders. Selection is based on excellence in K-12 mathematics, science, or technology teaching; demonstrated leadership; an understanding of national, state, and local education policy; and communication and interpersonal skills. The Fellowship program was created in 1990 with support from the MacArthur Foundation. Congress formalized the program in 1994 by passing the Albert Einstein Distinguished Educator Fellowship Act. The Triangle Coalition administers the program under the direction of the Department of Energy. The application deadline is January 13, 2009.

\*\*\*\*Apply online at

<https://applicationlink.labworks.org/applicationlink/default.htm>

\*\*\*\*For more information about the Einstein Fellows program visit [www.trianglecoalition.org/ein.htm](http://www.trianglecoalition.org/ein.htm) or contact Liz Burck at [burckl@triangle-coalition.org](mailto:burckl@triangle-coalition.org).

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#### **Team America Rocketry Challenge**

Registration for the 2009 Team America Rocketry Challenge (TARC) is now underway. Be one of the first 750 teams to register by December 1st at [www.rocketcontest.org](http://www.rocketcontest.org). The contest challenges middle and high-school students across the country to design and build a rocket that will climb to 750 feet and stay aloft for 45 seconds. The rocket must also transport a payload of one egg lying on its side, mimicking the position of an astronaut. The top 100 qualifying teams are invited to compete at Great Meadow in The Plains, Va. (outside of Washington, D.C.), in May for a final fly-off and a chance to win more than \$60,000 in scholarships and other prizes. The winning team also earns the chance to attend the Paris Airshow in June. For complete rules and registration information, please visit [www.rocketcontest.org](http://www.rocketcontest.org)

Plus, Here a link to the AIAA 2009 Design Challenge Competition:

<http://www.aiaa.org/content.cfm?pageid=210>

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### from ANROE (Alaska Natural Resources and Outdoor Education Association) Newsletter

#### **Anchorage: June, 2009- Stockholm Junior Water Prize**

The Alaska Water Wastewater Management Association (AWWMA) will be hosting the Stockholm Junior Water Prize in Anchorage in June 2009. The Stockholm Junior Water Prize is world's most prestigious youth award for a water-related science project.

High school students (grades 9-12) who enter a water-related project in any local or regional science fair are eligible to participate in the Stockholm Junior Water Prize competition. Projects may focus on local, regional, national, or global issues. It is essential that all projects use a research-oriented approach, which means they must use scientifically accepted methodologies for experimentation, monitoring, and reporting, including statistical analysis. Students enter online at [www.sjwp.org](http://www.sjwp.org). Winners and their science teachers receive a free trip to the U.S. national competition. The national winner and his or her science teacher represent the United States at the international competition, held each August in Stockholm, Sweden. For more information contact Angie Monteleone at [awwma@gci.net](mailto:awwma@gci.net) or 561-9777.

#### **Application deadline: November 1- Target Field Trip Grants**

The Target Field Trip Grants Program allows teachers to offer valuable experiential learning gained from field trips to enhance students' classroom studies. Funds may be used to cover cost of transportation, entry fees, supplies and equipment and resource materials. <http://www.target.com/teachers>

#### **Application deadline: November 30- Ciba Science Teaching Awards**

Ciba Specialty Chemicals Exemplary Middle Level and High School Science Teaching Awards recognize teachers who have demonstrated exemplary science teaching in one or more of the following areas: creativity using science teaching materials; design and use of innovative teaching plans and ideas; development and implementation of department, school, or school-community programs that improve science instruction and/or stimulate interest in science and the learning of science; and reflecting the National Science Education Standards. <http://www.eeingeorgia.org/net/content/go.aspx?s=75512.0.0.4863>

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### HELPING YOUR CHILD SERIES Offers Math and Science Resources

The "Helping Your Child" publication series from the U.S. Department of Education aims to provide parents (and others) with the tools and information necessary to help their children succeed in school. The booklets are topic related and feature practical lessons and activities to help children with math and science. The "Helping Your Child Learn Science Every Day" publication is filled with opportunities to learn science -- without expensive chemistry sets or books. Parents don't need degrees in chemistry or physics to help their children learn science. All that is needed is a willingness to observe and learn with them, and, above all, to make an effort and take the time to nurture their natural curiosity. This booklet provides parents of children aged 3 through 10 with information, tools and activities they can use in the home and community to help their child develop an interest in the sciences and learn about the world around them. The "Helping Your Child Learn Mathematics" booklet is made up of fun activities that parents can use with children from preschool age through grade 5 to strengthen their math skills and build strong positive attitudes toward math. More details are online

<<http://www.ed.gov/parents/academic/help/hyc.html>> .

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### Real World Design Challenge

U.S. Department of Energy Launches Real World Design Challenge to Inspire High School Students to Study Engineering: The U.S. Department of Energy (DOE) has launched the Real World Design Challenge (RWDC), a new annual competition that provides high school students with the opportunity to work on real world engineering challenges in a collaborative environment. The purpose of the RWDC is to ensure the future of our Nation's economic competitiveness and national security by inspiring today's students to become tomorrow's engineers. The RWDC is a unique contest that challenges students to apply the lessons of the classroom to the technical problems currently faced in the engineering field. The theme for the 2009 Challenge is "Aviation and Fuel Consumption." Student teams will be asked to redesign an existing aircraft to improve its fuel efficiency without drastically reducing its performance capabilities. Students will use professional engineering software to develop their solutions.

The RWDC will take place first at the state level and then at the national level. Participation in the competition is open to high-school age students, grades 9 - 12,

residing in or attending school in one of the 10 states participating in this inaugural year: Connecticut, Hawaii, Kansas, Massachusetts, Minnesota, Oklahoma, Pennsylvania, Vermont, Virginia and Washington. Teams must register by November 15 and will have until February 2 to submit their design solutions at the state level challenge. Sixty five teams have registered to date. Each state will select its top team to represent the state at the RWDC national competition to be held March 2009 in Washington, DC. DOE will provide the 10 winning teams with expense-paid trips to the national competition, subject to annual appropriations. DOE plans to expand the competition to additional states in the future. Each year the student teams will address a different engineering challenge.

(For more information about the DOE Real World Design Challenge, please see the October 20 DOE news release: <http://www.doe.gov/news/6669.htm>.)

Program Contact: Bill Valdez, SC-27, 202-586-4479

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### **Alaska Miners Association Annual Convention**

Alaska Miners Association Annual Convention is quickly approaching. This year's convention is entitled, **"Water Management for Mining"**, with clean water issues being discussed by state, federal and industry representatives. Some events or presentations that you may be particularly interested in include:

'Water Management for Mining' short course taking place all day Monday, 11/3/08 and Tuesday, 11/4/08

'Ballot Measure 4', Willis Lynford- 11/6/08 @ 8:50 a.m. in Ballroom B & C

'Recap of the Issues', Greg Beischer- 11/06/08 @ 9:45 a.m. in Ballroom B & C

'The Financial Meltdown- What it Means for Mining', Joe Beedle- 11/06/08 @ 10:30 a.m. in Ballroom B & C

'Pebble Limited Partnership 2008 Activity Update', Mike Heatwole- 11/06/08 @ 4:35 p.m. in Ballroom B & C

'Developing a World Class Mining Company, The History of Kennecott' 11/06/08 7:00-9:30 p.m. (this would fit well with a series on Alaskan History)

For more information contact:

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### **NASA Opportunity for Students in Grades 9-12: INSPIRE**

The Interdisciplinary National Science Project Incorporating Research and Education Experience, or INSPIRE, is a multi-tiered project for students and their parents or legal guardians.

Applications from students in grades 9-12 are now being accepted for INSPIRE's online community through Dec. 31, 2008. NASA's mission provides the content for the online community. Resources, activities and educational modules add relevancy to courses being taught in high school. Activities include participation in video teleconferences with NASA scientists, design competitions and learning modules. The online community allows students to interact with other students with similar interests, to ask questions and to share knowledge, thus building a "Community of Practice." The online community will also offer support for parents to help them better champion their students' goals. Once selected for the online community in January 2009, students will then be invited to compete for the unique grade-appropriate summer experiences ranging from a one-day VIP tour and workshops, a two-week on-campus collegiate experience, to paid summer internships. The dates of the summer experiences and the location of the two-week on-campus collegiate experience will be announced in January, and students will be notified of selections in February.

INSPIRE provides grade-appropriate NASA-related resources and experiences to encourage and reinforce students' aspirations to pursue science, technology, engineering and mathematics, or STEM, education and careers. The project also offers resources and information for parents to help them better champion their students' goals. INSPIRE provides participants a rich online community, as well as opportunities to compete to participate in NASA/STEM Experiences.

For more information about this opportunity, visit [http://www.nasa.gov/audience/forstudents/postsecondary/programs/INSPIRE\\_Project.html](http://www.nasa.gov/audience/forstudents/postsecondary/programs/INSPIRE_Project.html).

If you have questions about this opportunity, please e-mail your inquiries to INSPIRE Project Manager Steve Chance at [steven.h.chance@nasa.gov](mailto:steven.h.chance@nasa.gov).

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