

SYSTEMIC CONNECTIONS



January 30, 2012 Volume 20

This is an STEM information exchange that is available to all teachers in the Anchorage School District

CALENDAR - STEM EVENTS 2011-2012

February 4	Lego League Statewide Open Championship Ryan Middle School, Fairbanks
February 4	Women of Science & Technology Day - presented by Girl Scouts @ UAA
February 10-11	FIRST Tech Anchorage Qualifier SAHS Anchorage
February 25-28	ASTE 2012: Create~Collaborate~Innovate
Feb 28-Mar 2	Iditarod Winter Conference for Educators
March 2-3	High School Robotics State Championship Patty Center, UAF
March 3	First Use Science Kit Training (K-6)
March 23-25	AK Science & Engineering Fair - Begich MS
March 29 - April 1	NSTA - Indianapolis, IN
March 31	Science Olympiad - UAA Campus
April 24- May 5	Math Derby
May 8-11, 2012	CCSC - Outdoor Week (Grade 6)
May 8-11, 2012	Outdoor Week
June 24-28, 2012	Nat'l Marine Educators Conference Anchorage

STEM Web Page Highlights

Objectives & Initiatives for 2011 – 2012

<http://www.asdk12.org/depts/STEM/objectives.asp>

Links to local STEM programs –

Campbell Creek Science Center, Imaginarium, UAA Planetarium, Alaska Zoo. <http://www.asdk12.org/depts/STEM/>

Please read and then TRY some of these!

1. LAB SAFETY Announcement
2. Geosource for K-5
3. 2012 Thacher Environmental Research Contest
4. EPA Offers Climate Change Toolkit for Middle School
5. GSA Geoscientists Reach Out to Educators
6. MATHCOUNTS
7. Call for Applications - Girls on Ice 2012 Expeditions
8. Young Scientist Challenge
9. New NASA Kids' Club Activity: Window to Earth

10. National STEM Video Game Challenge
11. TeachingKidsProgramming.org
12. Green Boot Camp
13. Rock & Roll Around Alaska

CHECK OUT THESE SITES:

CRITICAL PAST

<http://www.criticalpast.com/>

MULTIMEDIA LEARNING SERIES

<http://www.nbclearn.com/portal/site/learn/resources>

EARTH SCIENCE WEEK - year round resources

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

TI MATH

<http://education.ti.com/calculators/timath/>

NASA BLUE MARBLE

http://www.nasa.gov/vision/earth/features/blue_marble.html

LAB SAFETY Announcement

The president of the Laboratory Safety Institute, Dr. James Kaufmann, is going to be visiting UAA from Feb. 29-Mar. 4 and will be presenting a community outreach session March 1st from 7-9pm in the first floor lecture hall of the Conoco Phillips Integrated Science Building at UAA. Given the number of recent lab accidents that have gotten national attention, and the lawsuits surrounding them, this is a serendipitous opportunity to listen to Dr. Kaufmann present. He is a national expert and runs lab safety workshops via the LSI all around the country.

If you would like to attend, please RSVP with Lesley Lepley at UAA (lnlepy@uaa.alaska.edu, 907-786-1343) so the university has an idea of how many people might attend

If you would like more information, please email the state science coordinator Bjorn Wolter at bjorn.wolter@alaska.gov

Geosource for K-5

Welcome to K-5 Geosource, the one-stop professional development web site for Earth science! If you are involved in elementary science education in any way, this Web site is for you. The site has a rich store of content, activities, services and links for you to explore, but this is only the beginning. We encourage you to come back often and tell us what you think. <http://www.k5geosource.org/>

Contest Spurs Students to Environmental Research 2012 Thacher Environmental Research Contest

From the Gulf oil spill to the decline of Arctic sea ice, NASA satellites and other observing instruments have proved crucial in monitoring environmental changes. The 2012 Thacher Environmental Research Contest, sponsored by the Institute for Global Environmental Strategies, challenges high school students to conduct innovative research on our changing planet using the latest geospatial tools and data.

Top projects will receive cash awards of \$2,000 for first place, \$1,000 for second place, and \$500 for third place. Individuals or teams of up to four students may enter. In addition to the student prizes, teachers or adult coaches of winning students will receive \$200 Amazon.com gift cards. Learn more at <http://www.strategies.org/thachercontest>.

EPA Offers Climate Change Toolkit for Middle School

The U.S. Environmental Protection Agency has released a free collection of resources to enhance middle school students' understanding of climate change impacts on the United States' wildlife and ecosystems.

"Climate Change, Wildlife, and Wildlands: A Toolkit for Formal and Informal Educators" contains case studies, activities, and videos based on climate science, environmental education, and stewardship information. The toolkit is available online at <http://www.globalchange.gov/resources/educators/toolkit>. For more information, see <http://www.epa.gov/climatechange/wycd/CCWKit.html>.

GSA Geoscientists Reach Out to Educators

Teachers and students alike can learn a lot from the Geological Society of America (GSA), an AGI member society and Earth Science Week partner. GSA is an organization of geoscientists in industry, government, business, and academia who are committed to the ongoing professional growth of Earth scientists.

One of GSA's major education and outreach programs, the Teacher Advocate Program (TAP), provides "Explore Geoscience" CD-ROMs, lesson plans, educational materials, and resource links for Earth science teachers. For more information on TAP, visit <http://www.geosociety.org/educate/tap.htm>. Teachers also can take advantage of GSA's Teacher GeoVenture trips, teacher workshops, and Distinguished Earth Science Teacher in Residence. GSA also offers a number of teacher awards and fellowships. See <http://www.geosociety.org/awards/aboutAwards.htm> to learn more.

Students are encouraged to apply for GSA's GeoCorps America program, which works with the National Park Service, the Forest Service, and the Bureau of Land Management to place young geoscientists in geoscience-related positions at national parks. Find out more at http://rock.geosociety.org/g_corps/index.htm.

MATHCOUNTS

Learn about MATHCOUNTS, Reel Math Challenge and Club programs.

TI is a proud sponsor of MATHCOUNTS. MATHCOUNTS inspires middle grades math excellence nationwide. One of the nation's largest education partnerships, MATHCOUNTS promotes middle grades math achievement through volunteer and corporate sponsor

involvement. Honored by five U.S. Presidents and now in its 29th year,

MATHCOUNTS provides exciting math programs that give students a foundation for further math success. Encourage your students to take the MATHCOUNTS Reel Math Challenge

This free online competition sparks innovation in your students as they create and star in their own math videos.

Get a free resource kit from the MATHCOUNTS Club Program. This program builds student confidence and enthusiasm at all levels with free resources and activities. Register for your free Club in a Box Resource Kit.

Visit MATHCOUNTS and sign up for their free programs today. <http://www.reelmath.org/>

Call for Applications - Girls on Ice 2012 Expeditions *29 July - 9 August at Mount Baker, Washington* *15-25 July in Alaska*

Organizers announce that the Girls on Ice 2012 Expeditions are now accepting applications. The 2012 program includes two expeditions. The original North Cascades expedition on Mount Baker in Washington State will be held 29 July - 9 August 2012, and a new Alaska-based expedition will take place 15-25 July 2012.

Girls on Ice is a unique, free, wilderness science education program for high school girls. Each year a team of nine teenage girls and three instructors spend 11 days exploring and learning about mountain glaciers and alpine landscapes through scientific field studies with professional glaciologists and mountaineers.

Applicants must be at least fifteen years old by 15 July 2012 and no older than eighteen on 9 August 2012. The application process requires a series of short essay questions and two teacher recommendations. The Alaskan expedition is primarily intended for Alaskan and Pacific Northwest girls.

For further information, or to download the application form, please go to: <http://girlsonice.org/apply>. Funding for Girls on Ice is provided through small grants, gifts from individuals, and support from the National Science Foundation and the University of Alaska Fairbanks.

Application deadline: Thursday, 1 March 2012.

For further information, please go to:

<http://girlsonice.org>.

For questions, please email:

info@girlsonice.org.

Young Scientist Challenge

The Discovery Education 3M Young Scientist Challenge is now accepting entries for the 2012 competition. Open to students in grades 5-8, the [Young Scientist Challenge](#) provides the opportunity for one lucky student to win: **\$25,000**, a once-in-a-lifetime trip with Discovery Student Adventures, and the distinguished title, "America's Top Young Scientist."

Ten finalists will have the opportunity to work directly with a 3M scientist during an exclusive summer mentorship and bring their innovative ideas to life.
<http://www.youngscientistchallenge.com/>

New NASA Kids' Club Activity: Window to Earth

Astronauts have a spectacular view of Earth from space. Move through the pages of Window to Earth and see images taken from space of these geographical features: peninsula, glacier, lake, desert, cape, island, upheaval dome, strait, waterfall, reef and volcano.

To take a peek and see how Earth looks from space, visit
http://www.nasa.gov/audience/for_kids/kidsclub/flash/clubhouse/Window_to_Earth.html

For more fun activities, visit
<http://www.nasa.gov/kidsclub>.

National STEM Video Game Challenge

The National STEM (science, technology, engineering, and mathematics) Video Game Challenge aims to motivate interest in STEM learning among America's youth by tapping into students' natural passions for playing and making video games. The 2012 Challenge features two competitions, a Youth Prize (grades 5-8) and a Developer Prize (open to emerging and experienced game developers). Deadline: March 12, 2012. Details:
<http://www.stemchallenge.org>

TeachingKidsProgramming.org

Teaching Kids Programming is a global non-profit designed to provide programming lessons for middle school and high school age youth utilizing free materials. The framework consists of 14 weeks of courseware "recipes" that are taught in small, practical steps and give rapid visual rewards as the student's skill progresses.
<http://teachingkidsprogramming.org/blog>



Step inside the Classroom of a Greener Future

Teachers who teach sustainability inspire students to take those principles out into the world and effect change. Honeywell's Green Boot Camp teaches middle school teachers how to turn their classrooms into fertile ground in which ideas about sustainability can thrive. And for you, this no cost, five-day workshop could be the opportunity of a lifetime.

Sow
 At Green Boot Camp, you'll be able to view sustainable educational methods from the perspective of your students. These hands-on, interactive lessons will provide you with experiences that you'll be able to transfer into your own classroom. Project-based learning modules include renewable energy, water quality, solar and more. The camp's curriculum is developed by teachers for teachers. You'll leave with lesson plans and materials to help you teach what you have learned.

Bloom
 We're looking for self-motivated, environmentally-aware middle school teachers from any discipline. If you fit this description, our program will challenge you and help you discover new ways to convey green and sustainable concepts to your students.

Grow
 Green Boot Camp is a great way to earn continuing education units or professional development hours at no cost to you. Honeywell is investing in the teachers of tomorrow by offering scholarships to cover the cost of registration, hotel and travel expenses for all qualifying teachers.

APPLY NOW

If you're a middle school teacher interested in attending Green Boot Camp:
Apply online: www.honeywellinteract.com/greenbootcamp
Accepting applications: February 1 - March 31, 2012
Selected teachers notified: Week of April 16, 2012
Dates of camp: July 16 - 20, 2012
For more information: www.honeywellinteract.com/greenbootcamp

Find Out More
 Contact Honeywell today to find out more about Green Boot Camp. Visit honeywellinteract.com/greenbootcamp or email greenbootcamp@honeywell.com.

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Honeywell



You are Invited to Rock & Roll Around Alaska!

Alaska Resource Education would like to invite you to attend our "Rock n' Roll" Around Alaska course! This course is designed to give you the tools to teach your students about Alaska's natural resources with fun, interactive curriculum and activities.

ATTENTION: Limited seats available so sign up now!

During this 15-hour course you will receive:

- One 500-level UAA Graduate Credit (applicable for re-certification requirements)
- Alaska standards based Curriculum with fun, hands-on activities for grades K-8 (curriculum adaptable for grades 9-12)
- Meals, beverages and snacks!
- Field Trip to an Industry site
- A FREE Alaska resources kit that includes:
 - a set of 40 Rocks and Minerals
 - DVD's and CD's
 - posters and books for the classroom
 - rock testing kit & magnifying loupe and much, much more!!

When:

- Thursday, February 23rd
4:30pm - 8:30pm
- Friday, February 24th
4:30pm - 8:30pm
- Saturday, February 25th
9:00am - 4:00pm (time dependent on the field trip)

Deadline for sign-up: February 10, 2011

If you are unable to attend this course but are interested in future courses, please email Beth Klein with a school and home email address

Cost: \$74 UAA registration fee & a \$20 material fee (credit not required for course participation)

For registration or more information, please contact:
Beth Klein
 Education Director
bklein@akresource.org or (907)276-5485
www.akresource.org

"Outstanding Class! I'm so thankful for your resources and expert guidance in how to use them. High energy, supportive, outstanding module for training us in the awareness of resources in Alaska!"

"I enjoyed the energy of the instructor(s). They made it fun and interesting. Lots of activity which made time fly! I really liked the food, too. Thank you! Best class I've taken in awhile."