

# SYSTEMIC CONNECTIONS



December 12 , 2011 Volume 15

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

## CALENDAR - STEM EVENTS 2011-2012:

December 17	South Anchorage Qualifier SAHS
January 6-7	SEAPerch Workshop - Anchorage
January 21	Lego League Statewide Invitational Championship SAHS, Anchorage
February 4	Lego League Statewide Open Championship Ryan Middle School, Fairbanks
February 10-11	FIRST Tech Anchorage Qualifier SAHS Anchorage
February 25-28	ASTE 2012: Create~Collaborate~Innovate
February 25	ROV Riot - Bartlett Pool
Feb 28-Mar 2	Iditarod Winter Conference for Educators
March 2-3	Statewide Championship Patty Center, UAF Sponsored
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. The Futures Channel - Aquarium Makers Rely on Math & Science**
- 2. Call for Proposals - 2012 Nation Marine Ed Conference**
- 3. "Student Interactive Compare & Contrast Map"**
- 4. Start the New Year with an Online Graduate Course from AMNH**

- 5. ExxonMobil Bernard Harris Math and Science Scholarships**
- 6. Double Science Fun with Two Activities from FLINN**
- 7. from ANROE Electronic Newsletter December 7, 2011**
- 8. Einstein Fellowship Applications Due January 5**

## **CHECK OUT THESE SITES:**

**BioLogica**

[http://biologica.concord.org/webtest1/web\\_labs.htm](http://biologica.concord.org/webtest1/web_labs.htm)

**Steve Spangler**

<http://www.stevespanglerscience.com/experiments>

<http://www.stevespanglerscience.com/experiment/00000075>

**Curiosity in the Classroom**

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

**Upcoming T3 Math and Science Webinars**

<http://education.ti.com/go/upcomingwebinars>

**EarthScienceGuy**

<http://earthscienceguy.blogspot.com/>

**Interested in the NEW Common Core State Standards?**

Check out <http://www.commoncoresolutions.com/>

## **The Futures Channel Movie of the Week**

### **Aquarium Makers Rely on Math & Science**

You had better be sure your math is right if you're going to put 5,000 gallons of water, fish, coral and sand inside a house or office! Introduce your students to the owners of Infinity Aquariums. They love the challenge of recreating a slice of the ocean indoors. Day in and day out, they use volume calculations, temperature, measurement and lots of science to create these beautiful habitats. Be sure to check out the downloadable classroom activity titled Aquariums Under Pressure, located just below the movie player. Watch the movie and download the classroom activity:

[http://www.thefutureschannel.com/dockets/realworld/aquarium\\_makers](http://www.thefutureschannel.com/dockets/realworld/aquarium_makers)

### **Also Playing**

#### **The Horse Doctor**

[http://www.thefutureschannel.com/dockets/critical\\_thinking/horse\\_doctor/index.php](http://www.thefutureschannel.com/dockets/critical_thinking/horse_doctor/index.php)

### **Creating Cars**

[http://www.thefutureschannel.com/dockets/realworld/creating\\_cars/index.php](http://www.thefutureschannel.com/dockets/realworld/creating_cars/index.php)

### **Spaceports**

<http://www.thefutureschannel.com/dockets/space/spaceports/index.php>

### **The Business of Farming**

[http://www.thefutureschannel.com/dockets/realworld/business\\_of\\_farming/index.php](http://www.thefutureschannel.com/dockets/realworld/business_of_farming/index.php)

## Call for Proposals - 2012 Nation Marine Ed Conference

The Call for Proposals for the 2012 National Marine Educators Conference, *North to Alaska's Seas: a confluence of science and culture*, is now open until February 17, 2012. The conference, which will take place in Anchorage, Alaska, during June 24-28, 2012, will bring together formal and informal educators, scientists, students, and resource managers to share ideas about the world of water. Since 1976, NMEA conferences have built a reputation of cutting-edge ideas, presentations, information and experiences. Conference sponsors this year are the Northwest Aquatic and Marine Educators (NAME) and the Alaska Center for Ocean Sciences Education Excellence (COSEE Alaska). Conference themes include Science and Art, Science and Culture (to include the integration of traditional knowledge and western science), Science and Technology, and Large Marine Ecosystem Science and Education.

Go to NMEA Conference 2012

<<http://www.coseealaska.net/nmeaconference2012/>> for conference information and download the Call for Proposals

<<http://www.coseealaska.net/files/alaska/2012%20NMEA%20Call%20for%20Proposals.pdf>> here.

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## Compare & Contrast Map - ReadWriteThink "Student Interactive Compare & Contrast Map"

<http://www.readwritethink.org/classroom-resources/student-interactives/compare-contrast-30066.html>

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## Start the New Year with an Online Graduate Course from AMNH

Seminars on Science connects classroom teachers to scientists engaged in current, real-world research. Authored by leading scientists in their fields, all courses are co-taught by an experienced educator and a researcher affiliated with the American Museum of Natural History. Courses include Climate Change; The Solar System; Genetics, Genomics, Genethics; Evolution; and more.

All courses run for six weeks and are fully online. Each participant receives a CD of course resources suitable for classroom use. Affordable graduate credit is available for all courses (see website for details).

Please see the website for the full course listing. Free sample resources for each course—including essays, videos, and interactive simulations—are available online. Spring Session 1 runs January 23–March 4. Registration closes January 9. Register early for a \$50 discount! For more information and to register, go to [learn.amnh.org](http://learn.amnh.org) or call 800-649-6715.

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## ExxonMobil Bernard Harris Math and Science Scholarships

The ExxonMobil Bernard Harris Math and Science Scholarship is an opportunity especially for African American

and Hispanic students.

<http://www.cgcs.org/site/Default.aspx?PageID=47>

Named for the first African American to walk in space, ExxonMobil Bernard Harris Math and Science Scholarships are available to 2012 graduating high school seniors in school districts represented by the Council of the Great City Schools.

Four scholarships for two males and two females --- \$5,000 each --- will be awarded to two African American and two Hispanic students on behalf of the former NASA astronaut, physician and businessman, Dr. Bernard Harris. Deadline for submissions is April 2, 2012.

Please distribute the scholarship application and guidelines in your districts. For students to apply, they should click here

<http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/19/ExxonMobil%20%202012%20Scholarship%20Application.pdf> or access the Council's website at [www.cgcs.org](http://www.cgcs.org) <<http://www.cgcs.org>>

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## Double Science Fun with Two Activities from FLINN

Just click the link below . . . for TWO free middle school activities--one for life science and one for physical science--from Flinn Scientific.

Students will have fun investigating the motion of water through plants using "Transpiration Demonstration"-- the results are easy to see and measure. The physical science activity, "Double Replacement Reaction," will help students understand this unique chemical change.

To view and print your free write-ups of both activities please go to:

[http://www.flinnsci.com/Sections/MS/Activities/MS\\_act.asp](http://www.flinnsci.com/Sections/MS/Activities/MS_act.asp)

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## from ANROE Electronic Newsletter December 7, 2011

### *Encounters: Radio Experiences in the North*

This is a nationally-distributed public radio show about natural history in the North. Hosted by cultural anthropologist and award-winning writer Richard Nelson, and former NPR senior correspondent Elizabeth Arnold, the show mixes western science and native knowledge with unusual natural sound and a first person experience. Now, the program has expanded its website to include information for teachers and student researchers.

[www.encountersnorth.org/wildexplorer](http://www.encountersnorth.org/wildexplorer)

<<http://www.encountersnorth.org/wildexplorer>> is a carefully researched, reliable, multi-media source for students and teachers looking for information on everything wild in the north - polar bears, moose, grizzlies, and more. There are slide shows, videos, short sound clips and of course the full length radio programs (29 minutes) that make excellent teaching tools. And it's free!

### *Atlas of the Cryosphere*

This atlas allows visitors to explore and dynamically map the Earth's frozen regions. Viewed from a polar perspective, the available scenes include snow cover, sea ice extent and concentration, and more. The atlas also allows users to save custom maps for use as images in other documents and to view monthly climatologies to see how and where the cryosphere shrinks and grows over the course of a year. <http://nsidc.org/data/atlas/>  
<<http://nsidc.org/data/atlas/>>

### *Biologist in Training*

This program from the U.S. Fish & Wildlife Service is designed to guide students through a hands-on exploration of aquatic habitats. The BiT Activity Booklet has been designed with the needs of upper elementary science teachers in mind. Activities offer different means of collecting, organizing, and analyzing biological information, and focus on the students' use of observation skills to make their own discoveries. Additional resources include the BiT Activity Card geared towards younger students, extension activities, and more. The activities correlate to National Science Education Standards, and were developed by a team of teachers and environmental education experts. <http://www.fws.gov/southeast/fisheries/BiT/>  
<<http://www.fws.gov/southeast/fisheries/BiT/>>

### *Anchorage: December 21: Alaska's Energy Picture*

Kara Moriarty of the Alaska Oil and Gas Association and Chris Rose of the Renewable Energy Alaska Project will help answer questions about energy resources in Alaska. The program begins at 7pm on Wednesday December 21 at the BLM Campbell Creek Science Center (5600 Science Center Drive). Please call 267-1241 for more information.

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### **Einstein Fellowship Applications Due January 5**

[Apply to 2012-2013 Einstein Fellowship](#) The Albert Einstein Distinguished Educator Fellowship Program provides a unique professional development opportunity for accomplished K-12 educators in the fields of science, technology, engineering, and mathematics (STEM) to serve in the national education arena. Fellows spend eleven months working in a Federal agency or in a U.S. Congressional office, bringing their extensive knowledge and experience in the classroom to education program and/or education policy efforts.

<http://science.energy.gov/wdts/einstein/>

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