



# The Science Explorer

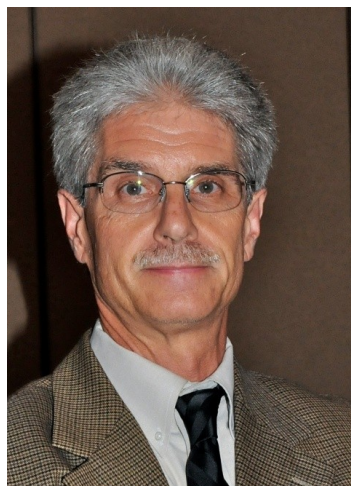
Suffolk Section: Science Teachers Association of New York State

Volume 42

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## The Chairperson's Corner



**Glen Cochrane**

The 2013-14 school year is well underway and we are still wondering if there are changes happening in our New York science curriculum. Changes are happening across the nation but what

will be the future of NY science education

while issues abound with recent mandates? All stakeholders involved in public education are concerned. Common Core testing, student privacy, APPR teacher evaluations, declining enrollment, and the 2% tax cap are some issues that come to mind. NYSUT had a wear blue day on December 9 as "A National Day of Action to Reclaim the Promise of Public Education". NYSUT has an open letter to the Board of Regents and Commissioner King with over 10,000 signatures asking for fair funding for public schools and colleges, a three-year moratorium on high-stakes consequences of state standardized tests, and a renewed focus on teaching and learning, not testing. The implementation of the Common Core testing this past spring and the rollout of additional exams has raised the ire of the educational community. Commissioner King has been attending public forums across the state to listen to concerns and explain the New York State Education Department (NYSED) position. Last October, an online survey was

completed comparing our current Science cores with the Next Generation Science Standards (NGSS) and those results are still being analyzed by SED. In November, the STANYS Board of Directors adopted an official position statement to recommend the adoption of NGSS with particular caveats. NSTA has also endorsed NGSS and several states have adopted NGSS. What is the position of NYSED and the Board of Regents with regard to new science standards? It is my hope that when new science standards are addressed, a timeline and plan is in place that will result in a smooth transition. There should be significant teacher involvement in developing a New York version of the science standards that reflects an improvement and not a reduction in what we offer our students. Maybe when the dust settles over the current issues, NGSS and new state standards will be brought to the table.

You should know that the Suffolk Section has been active during the fall and we looking forward our spring events. Thanks to the efforts of Melissa Torre, our annual materials and book fair (MATEX) on Thursday October 24<sup>th</sup> was a success. Melissa coordinated contacting the vendors and handling the arrangements with the Hyatt Regency Long Island. Our team of board members and SARs assisted with

*(Continued on page 3)*

### Upcoming Events:

- C Division Science Olympiad Regional- February 8
- B Division Science Olympiad Regional— March 1
- LISC— St. Joseph's College : March 19-20
- Suffolk STANYS Annual Conference at SUNY Stony Brook— March 22
- SCSTA Annual Awards Dinner: May 21, 2014
- NYS Science Congress at Brookhaven Nat. Lab – May 31

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## WHO'S WHO IN STANYS SUFFOLK SECTION LEADERSHIP

The following people can provide information on membership, teacher workshops and other activities. The Subject Area Representatives (SARs) can provide current information on NY State Education Department Core Curricula and testing programs.

◆Indicates individuals who serve in more than one capacity and for whom contact information is listed only once.

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### Retiree SAR

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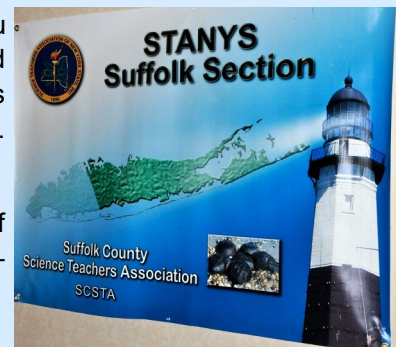
Melissa Torre

Suffolk STANYS has its own website at [www.SuffolkSTANYS.org](http://www.SuffolkSTANYS.org). If you visit the website you will get up to date information about scheduled meetings, trips, and events. You will also get access to suggested links separated by subject area & contests your students might be interested in. You can even find some of our newsletters online!

Join the hundreds of people who liked Science Teachers Association of New York State (STANYS) on [facebook.com](https://www.facebook.com). Connect with science teachers from around New York State.

Don't forget to utilize our state website as a resource:

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



### Chairperson's Corner *(continued from page 1)*

*Changes are happening across the nation but what will be the future of NY science education while issues abound with recent mandates?*

the registration and presentations. More than 100 local teachers came to MATEX to see the latest offerings from publishers, non-profits, and see demonstrations from our science specialists. On Sunday, November 3, James Ripka organized a visit to "Oxygen Day Celebration" at the Joseph Priestley House in Northumberland, PA. Thanks to Gary Vorwald, our newsletter editor, issues of Science Explorer are made available to you on our website. Take a look at

our newsletter at <http://www.suffolkstanys.org/> and click on "newsletters".

We are currently planning our Annual Spring Conference which will be held at Stony Brook University on March 22, 2014. Once again, James Ripka, our conference chair, will select workshops and coordinate the events for the day. Plans are also underway for our Awards Dinner with District Membership to be held on May 21st. After a district becomes a member of our District Patrons Program, they are offered the opportunity to select their top senior science student to receive a plaque and attend the dinner with a teacher. **Awards for Excellence in Teaching** will also be

presented to teachers of elementary, intermediate and high school levels after a nomination and application process.

Suffolk STANYS, in coordination with Brookhaven National Lab, is also proud to be planning New York State Science Congress on May 31st. The students that attend the State Science Congress represent the very best researchers from STANYS affiliated regional science fairs. We would love the help of Suffolk Science teachers. If you are interested in assisting with this event, please don't hesitate to contact Glen Cochrane at [gblink735@gmail.com](mailto:gblink735@gmail.com).



## Help Wanted:

We are looking for a few teachers willing to serve as **Subject Area Representatives (SARs)** for Elementary, Biology, and Physics. As a SAR you will be in direct contact with a subject area Director-at-Large and receive communications concerning what is happening with the science standards in New York. You will also be invited to come to our meetings and help with the STANYS Suffolk events. Join us at the Spring Conference, the annual materials and book fair (MATEX), the State Science Congress, and the Awards Dinner. Share your expertise with articles in the Suffolk newsletter and at the conference. SARs are invited to an annual statewide meeting for

professional development to discuss subject issues and suggest topics for workshops. SARs are encouraged to participate by sharing in workshop presentations at the STANYS Annual Conference in Rochester and at local section programs. This is a great opportunity for you to get involved in your professional organization.



Join our merry band of volunteers! Pictured at right: Dr. James Ripka, Chemistry SAR with our Treasurer, Angela Lukaszewski. Above: Ashley Bloch, Vice President for Programs and Intermediate SAR, with our newest member!



## Materials and Textbook Exhibit (MATEX) Provides Free Materials for Teachers

Suffolk STANYS hosted the annual Materials and Textbook Exhibit on October 17 at the Islandia Marriot. There were 20 vendors including microscope companies, publishers, non-profit organizations, and the Suffolk Section Subject Area Representatives (SARs). More than 80 people attended and the event raised needed funds that will support the activities of the Suffolk Section. We would like to thank all of our vendors and volunteers for their participation and contributions to science education on Long Island. Special thanks to Melissa Torre for organizing and coordinating the successful event.



*Suffolk STANYS volunteers Melissa Torre, Alice Veyvoda, Sheilah Schumann and Ed McDaniels helped make MATEX a success.*



*Melissa Torre, who coordinated the exhibit, with STANYS President-Elect Jason Horowitz from the Nassau Section.*

### Scenes from MATEX 2013



## Opportunities for Teachers & Students



**It's Never too Soon to Think About Next Summer!**

### **Summer Camps for Middle and High School Students at Stony Brook University – Summer 2014**

Before you know it, Spring will be here and your students may ask you about possible summer programs in science. The Center for Science and Math Education (CESAME) at Stony Brook University will be offering a wide variety of programs for middle and high school students who are interested in exploring different aspects of science in a camp setting.

Two to four week camps on topics that include Biotechnology, Forensics, Science Exploration, Mathematics, Engineering, and Physics. See the CESAME web site for more details:

<http://www.stonybrook.edu/cesame/students/k-12.shtml>

### **CESAME Programs for Students**

The *Center for Science and Mathematics Education (CESAME)* at Stony Brook University invites middle and high school science teachers to bring their students to work in our state-of-the-art laboratory facilities to do inquiry experiments that are rooted in real world science.

CESAME offers five-hour lab experiences in Biology, Chemistry, Earth Science and Physics for Regents and AP level classes. These experiences are designed to expand on material that is addressed in the Core Documents for each science, and to meet some of the more advanced laboratory skill requirements for AP classes. More

information about the Teaching Labs and how to schedule a field trip for your classes can be found at the CESAME web site:

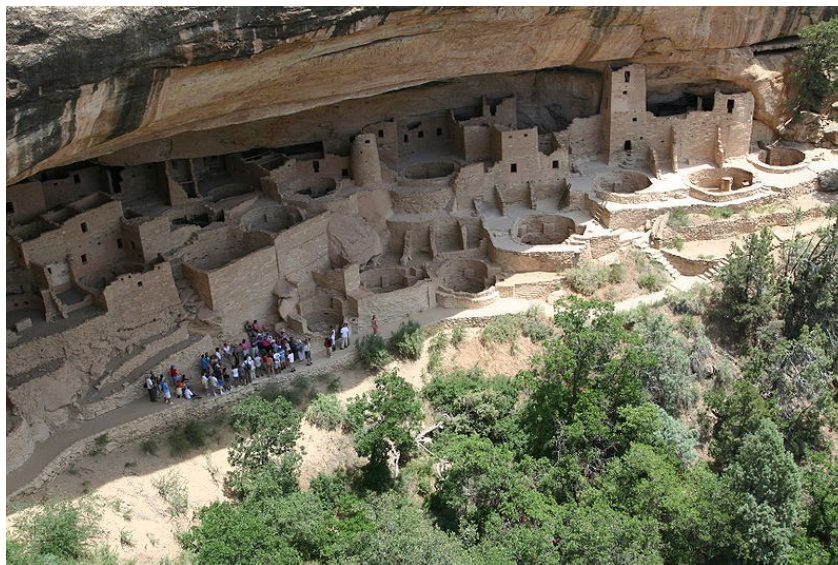


<http://www.stonybrook.edu/cesame/students/ScienceTeachingCenter/scienceteachingcenter.shtml> ■

## Crow Canyon Archeological Center Summer Workshop

**Mesa Verde National Park July 20-26, 2014**

Kathy Stemmler, Director of Education



This summer, the Crow Canyon Archeological Center is delighted to offer two week-long National Endowment for the Humanities (NEH) Summer Landmarks workshops for K-12 educators on a fascinating theme: ***Mesa Verde National Park: Convergences and Crossroads in the American Southwest***. We are writing to let our friends in the educational community know about this very special opportunity. **Each participant receives a \$1,200 stipend** to cover the cost of travel and living expenses for the workshop.

The Mesa Verde region of the American Southwest preserves approximately 1,800 years of Pueblo Indian history—yet this history is too often left out of textbooks. Who creates America’s history and culture? How do we understand the depth of time, the people, and the cultures that comprise our American past and inform the present? Guided by Crow Canyon archaeologists, educators, and American Indian scholars, workshop participants will address these fundamental questions amid the landscape and architecture of Mesa Verde National Park, the first place in the United States to be designated a UNESCO World Heritage site. The workshop includes:

- \* Experiential learning focused on how we learn about the unwritten past
- \* Hands-on archaeological fieldwork
- \* Field trips at Mesa Verde (with two nights at the park’s Far View Lodge)

We welcome applications from all interested participants—no previous anthropology or archaeology experience required! K–12 public, private, charter, parochial, and home-school educators are eligible, as are other K–12 school personnel, including administrators and librarians.

For program details and application instructions, visit our website listed below. The application deadline is **March 4, 2014** (postmark). <http://www.crowcanyon.org/programs/campus/NEHsummer2014.asp>

Questions? E-mail us at: [NEHsummer2014@crowcanyon.org](mailto:NEHsummer2014@crowcanyon.org) or call 800.422.8975, ext. 157.

# Experience Seminars on Science

Online Courses for Educators



Since 2000, *Seminars on Science*, an online professional development program at the **American Museum of Natural History**, has engaged thousands of educators around the world in cutting-edge research and provided them with powerful classroom resources. The program offers twelve online graduate courses in the life, Earth, and physical sciences. Each course is rich in essays, images, videos, interactive simulations and vibrant discussions that connect learners to the Museum's scientists, laboratories, expeditions and specimens. Graduate credit is available for all courses through partnerships with eight colleges and universities. Each online course costs \$495 and graduate credit is available at additional cost.

Upcoming course offerings have been posted for this Spring. Two summer sessions are also offered in May—August. Check the website for updates.

## Spring Session 2: March 17—April 27

*Earth: Inside and Out, The Ocean System, Genetics, Genomics, Evolution, Climate Change, Diversity of Fishes, Water*

Register by March 3 for Spring Session 2.

For more information and to register go to:

<http://www.amnh.org/learn/Courses>

Phone: 800-649-6715 Email: [seminfo@amnh.org](mailto:seminfo@amnh.org) ■



## Brookhaven Lab Open Space Stewardship Program

The Open Space Stewardship Program (OSSP), sponsored by Brookhaven National Laboratory Office of Educational Programs, fosters partnerships between schools and land stewards in their local communities. Students in grades K through 12 directly interact with nature as they collect data within their community. This program is designed to:

- \* benefit land stewards in the management of their property
- \* help students to learn about the scientific process through working with real-life data in the field
- \* promote scientific literacy
- \* encourage students to consider careers in science and technology
- \* foster a sense of civic responsibility and respect for the environment

Students in grades K through 12 are involved in authentic environmental research on properties in their own communities, fostering a sense of ownership and responsibility for open space within their neighborhoods. Each June students and teachers who participated in OSSP are invited to BNL for an OSSP evening celebration at which students display and present their work to teachers, parents, scientists and

others in the environmental community. For more information, contact Mel Morris, [mmorris@bnl.gov](mailto:mmorris@bnl.gov) or call 631-344-5963.

<http://www.greenoss.org/index.php>



Students from Paul J. Gelinas JHS with Mel Morris (left) and their teacher Gary Vorwald (right). The students presented their study of the Setauket Mill Pond water quality at the OSSP Evening Celebration held at Brookhaven National Lab last June.





# West Meadow Beach

## Spring Environmental Programs

February - May 2014



SPONSORED BY TOWN OF BROOKHAVEN - Conducted by Eileen Gerle, Environmental Educator

### Full Moon Hikes

Enjoy a rare opportunity to hike down Trustees Road by moonlight while learning about nocturnal animals that live at West Meadow Beach. If the skies are clear we will use a spotting scope to look at the basic features of the moon such as maria and craters.

*February 18, 8:30 – 10:00 pm; March 14, 7:30 – 9:00 pm*

### Birding Walks

These walks will highlight spring migrants as well as the year-round avian residents of West Meadow Beach. We'll be on the lookout for warblers, orioles, plovers and other shorebirds, herons, egrets, and Ospreys. Walks last approximately 2 hours.

*February 1 9:00 am; March 1 9:00 am; March 22 9:00 am*



### Seasonal Nature Walks

Learn about the flora and fauna of West Meadow Beach. These hikes will highlight animals that are seasonal visitors, in addition to the yearlong residents of the peninsula, and focus on the plant communities that make up beach habitats. Binoculars suggested, comfortable shoes, hat, a must. Walks last approximately 2 hours.

*February 15, 1:00 pm; March 29, 1:00 pm*

### Spring Beach Cleanup - Saturday, April 19, 9:00 am

In honor of Earth Day and the upcoming beach season, why not come down to West Meadow and help clean up debris deposited by winter storms. This is a great community service activity, and scouts can satisfy badge requirements.

**Latex gloves supplied. Work gloves, closed shoes recommended.**

### International Migratory Bird Day Saturday, May 10th 11:00 am – 2:00 pm

West Meadow Beach is a stopover destination for many species of migratory birds. We'll celebrate the incredible journeys of our fine-feathered friends during this fun-filled, educational, family event. This year's theme is **Life Cycle of Migratory Birds: Conservation Across the Americas**.

### RESERVATIONS ARE REQUIRED FOR ALL PROGRAMS

**Meet at the Covered Pavilion at West Meadow Beach, Trustees Road, Stony Brook**

E-mail your reservation to [egerle@brookhaven.org](mailto:egerle@brookhaven.org)

*\*Programs will not be conducted in inclement weather. Dates and times are subject to change.*

**Geoscience Enrichment Opportunities  
for Students and Science Teachers  
Stony Brook University  
Winter and Spring 2014**

### Field Trips

There will be a series of field trips on the geology of Long Island led by Gil Hanson. Teachers and professional geologists can receive attendance hours toward professional development for attending. If you wish to participate, please contact Gil Hanson [gilbert.hanson@stonybrook.edu](mailto:gilbert.hanson@stonybrook.edu).

Sat. April 5	9 AM to 12 Noon	Geology of Avalon Park and Port Jefferson
Sat. April 5	1 PM to 5 PM	Geology of Stony Brook Campus
Sat. April 19	9 AM to 12 Noon	Carolina bays and surface sediments in Pine Barrens
Sat. April 19	1 to 4 PM	Geology and Hydrology of the Carmans River
Sun. May 4	9 AM to 12 Noon	Geology and Hydrology of Weld Sanctuary
Sun. May 4	1:30 to 4:30 PM	Geology of Caumsett State Park

We will go rain or shine unless it is an extremely severe storm with lightning. Dress appropriately.

### Geology of Avalon Park and Port Jefferson - April 5

This Field trip will consider geomorphic features in Avalon Park in Stony Brook and then we will travel to Port Jefferson along tunnel valleys. Port Jefferson, including Port Jefferson Harbor, is the site of a large tunnel valley formed by an outburst of water from under the glacier.

### Geology of Stony Brook Campus - April 5

This is a walking field trip in which we will study rock types among the erratics, a short stratigraphic section of till overlain by sand and then loess, tunnel valleys, evidence for glacial tectonics, hummocky terrain, kettle holes and the boundary between the Harbor Hill Moraine and the Terryville Outwash Plain.

### Carolina bays and surface sediments in Pine Barrens - April 19

Carolina bays are elliptical to circular-shaped, shallow depressions found in abundance along the Atlantic Coastal Plain and have recently been found in undeveloped areas of Suffolk County. They are characterized by a closed elevated rim and a flat bottom. On this trip we will explore the possible relation of Carolina bays as secondary impact craters and pebbly loess as ejecta from these craters. One model suggests that these secondary impact craters may be associated with a bolide that struck the Laurentide ice sheet 12,900 years ago at the beginning of the Younger Dryas cooling event.

### Geology and Hydrology of the Carmans River - April 19

On this trip we will consider how the headwaters of the Carmans River has been migrating northward in an originally dry valley that developed during the last glacial maximum some 20,000 years ago. This smaller valley occupied by the Carmans River developed in a much larger valley that most likely also formed during the Last Glacial Maximum. On this trip we will consider both the development of the larger valley and features within it such as dry valleys and kettles.

*(Continued on page 11)*

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## Geology of Weld Sanctuary - May 4

At Weld preserve in Nissequogue, we will discuss the effects of sea level rise on the development of a wetland in a tunnel valley and see in-place roots of a tree in the intertidal zone, which provides evidence of recent sea level rise. If time permits we will visit a well-developed kettle hole in the sanctuary.

## Geology of Caumsett State Park - May 4

At Caumsett State Park, we will be able to see deformed Cretaceous sediments overlain by glacial lake sediments consisting of the bottomset beds, which are overlain by the foreset beds of a Gilbert delta, which are overlain by topset beds, till and then loess.

## Geoscience Teaching Laboratories

Through the *Center for Science and Mathematics Education (CESAME)* at Stony Brook University we are providing Geoscience Teaching Laboratories for middle and high school students. Earth Science teachers Steve Dickson and Chris Marotta offer programs that give students hands-on learning experience in surveying topography, measuring weather variables and determining microclimates, measuring porosity and permeability, and modeling real world processes on a stream table. They also offer a guided field trip to Caumsett State Park to study the geology of the north shore of Long Island. Some of these programs can be performed at your school. Through the NSF sponsored GeoPREP program at Stony Brook University these programs can be provided free to students at high-need schools. More information is available at [www.stonybrook.edu/cesame/students/ScienceTeachingCenter/geoscienceteachingcenter.shtml](http://www.stonybrook.edu/cesame/students/ScienceTeachingCenter/geoscienceteachingcenter.shtml)

## Geology Open Night

Geology Open Night is one of the Science Nights at Stony Brook University on Friday nights during the academic year from 7:30 to 8:30 pm in room 001, the Earth and Space Sciences lecture hall. Geology Open night lectures are usually on topics in the geosciences related to the current research of the faculty, staff and students at Stony Brook University. Middle and high school students are encouraged to attend. One hour towards professional development is available for attending. Information regarding the Geology Open Night lectures can be found at [www.geo.sunysb.edu/openight/](http://www.geo.sunysb.edu/openight/)

## Conference on the Geology of Long Island and Metropolitan NY Saturday, April 12, 2014

The twenty-first conference on the "Geology of Long Island and Metropolitan New York" will take place on Saturday, April 12, 2014. Topics for presentation include general geology, earth science education, glacial geology, stratigraphy, sedimentology, coastal geology, applied geology, environmental geology, engineering geology, hydrology, and bedrock studies emphasizing the geology of Long Island and Metropolitan New York. Major goals are to inform participants of ongoing research, to promote further research and collaboration among researchers, to define important areas where research is needed, and to encourage further research on Long Island and in Metropolitan New York. Middle and high school students are encouraged to attend. The abstracts of past presentations at the conferences are on the Long Island Geology web site at [www.geo.sunysb.edu/lig/](http://www.geo.sunysb.edu/lig/). Teachers and professional geologists can receive hours toward professional development for attending the conference.

## Award Opportunities for Teachers

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### STANYS Teacher Awards

Glen Cochrane, Awards Committee Chairperson

As we are already gearing up for the next STANYS conference in November, we are looking for teachers to submit applications for the **Excellence in Science Teaching Award**. This award honors one elementary, one intermediate, one high school and now one college educator who have been devoted to inspiring students and colleagues alike. There is also special recognition for a **Fellows New Teacher Conference Award**. To be selected, the applicant must: have commenced the second through fifth year of full time teaching in September, have never attended the STANYS Conference, be a member of STANYS (upon application), attend this year's full conference, submitted an application letter and a recommendation from a principal or department leader. The **Anton Banko Award for Excellence in Teaching Primary Science** recognizes an educator in early elementary grades who is an outstanding teacher of science. The award covers expenses (up to \$1500) to attend the STANYS annual conference and provides a \$500 stipend for the purchase of science material for the classroom.

For the Excellence in Teaching Award, you will need to describe and provide evidence on four aspects of your professional teaching career. We ask that you first present your philosophy of science teaching. The second aspect is to describe for us how you implement your philosophy of science teaching in the classroom. The third aspect is to provide evidence of the effective-

ness of your philosophy of teaching. We are looking to see not only letters of recommendation from colleagues, administrators, parents and students but you could also include publications, student work, articles, pictures—the list is endless! The final aspect that we ask for you to provide to us is a description of your professional involvement, not only in STANYS, but also with your school and your community. Two copies of your application, along with application entry form are due by July 1st.

Go to the STANYS website ([www.stanys.org](http://www.stanys.org)) for more in-depth information about both of these awards. Click on the "About" on the blue banner and then click on the **STANYS Excellence in Teaching Award**, **Fellows New Teacher Conference Award**, or **The Anton Banko Award for Excellence in Teaching Primary Science** links in the right column. On these pages you will also find a link to the application entry form as well as the rubric by which all applications are evaluated. You may also contact me with any questions or for more information: [gblink735@gmail.com](mailto:gblink735@gmail.com).

If you would like to nominate an individual for these awards, email me your name, that individual's name, position and contact information by May 1, 2014. I will contact that nominee and it will be up to them to complete the application process. Don't wait until the last minute! STANYS knows that we have excellent science teachers and we want to recognize you for the great things that you do. Let us know who you are and what you are doing! ■

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### Chemical Safety Video Available

Last December, the U.S. Chemical Safety Board (CSB) released, "**After the Rainbow**," a video about potential dangers in high school chemistry laboratories. The message features Calais Weber, an accident survivor, who on January 23, 2006, at age 15 was burned over 40 per cent of her body during a chemistry demonstration performed by her teacher at a prestigious boarding school she attended in Ohio. Calais describes the demonstration, called the "rainbow experiment," that was meant to show how various mineral salts produce different colors or flames when burned. Mineral salts were mixed with highly flammable methanol in small dishes.

Just a couple of weeks after the release of the video, two students were severely injured while observing the same demonstration in a Manhattan science lab ([http://www.nytimes.com/2014/01/04/nyregion/school-experiment-that-burned-boy-was-focus-of-federal-warning.html?\\_r=0](http://www.nytimes.com/2014/01/04/nyregion/school-experiment-that-burned-boy-was-focus-of-federal-warning.html?_r=0)). The importance of safe practices in the science classroom can not be overemphasized.

CSB videos may be streamed and downloaded at [www.CSB.gov](http://www.CSB.gov) from the CSB media room. They are also available on [www.YouTube.com/uscsb](http://www.YouTube.com/uscsb).

## Fellows New Teacher Conference Award 2014

Melissa Torre, Fellowship Committee Chairperson

The Fellows Endowment Fund, created in 1984, enabled the STANYS Fellowship Committee to establish a conference award for new teachers starting in 1992. The award supports the attendance of a science teacher in his/her **second to fifth year teaching** at the annual STANYS Conference. Three nights at standard double rate & full registration (includes two dinners & one breakfast) are covered by this award. The recipient is responsible for costs related to travel, Saturday events, & meals not included in registration.

We are pleased that the fund has benefited promising new educators for a number of years. We hope their association with STANYS will continue to be a part of a lifelong commitment to professional development.

If you are a new teacher, we welcome your application. If you are a veteran teacher, please encourage your new colleagues to apply. To be selected the applicant must meet the following criteria:

- \* Has commenced no more than their fifth year of full time teaching in September 2014
- \* Has never attended the STANYS Conference
- \* Is a member of STANYS (upon application)
- \* Will attend the conference (Sunday, November 3 through Tuesday, November 5)
- \* Has submitted an application letter & a letter of recommendation from a principal or department leader

In the letter of application, the teacher should address the following questions: Why do you wish to attend the

conference? How will this award help you? How did you hear about the STANYS organization? Please include your home & school address, phone numbers, e-mail address, grade level & courses taught.

The recommendation from the principal or department leader should include comments concerning how the applicant's attendance at the conference will benefit the district and how the applicant demonstrates evidence for a promising career in science teaching. Further the principal or department leader should identify if receipt of the award will be the only way to facilitate the applicant's attending the conference. The application should have documentation verifying that the applicant is entering no more than his/her fifth year of teaching and will be able to attend the full conference.

**Application letters must be postmarked by July 1<sup>st</sup>, 2014 & mailed to**

Melissa Torre  
STANYS Fellowship Committee Chairperson  
1030 9<sup>th</sup> St.  
West Babylon, NY 11704

[mtorre@jevitttownschools.com](mailto:mtorre@jevitttownschools.com) ■

## Real World Science for 5th & 6th Grade Teachers

**SUNY Stony Brook Summer 2014**

The Center for Science and Mathematics Education (CESAME) at Stony Brook University is pleased to announce a Summer 2014 workshop for 5<sup>th</sup> and 6<sup>th</sup> grade teachers (who hold elementary teacher certification) that will focus on teaching math and science. Similar in nature to the other Real World Science and Math programs that CESAME has sponsored in the past, participants in this workshop will leave with a wealth of ideas for standards-based lessons that can be implemented in the classroom to enhance student learning.

The weeklong series of interactive workshops in physical science, mathematics, earth science, botany, and literacy for elementary teachers will address real world applications of science and mathematics concepts. Participants in this workshop will have the opportunity to learn about and explore some of the connections that exist between their classroom instruction and the world beyond the classroom.

The program dates are Monday, June 30 to Thursday, July 3, 2014. Upon completion of the program, participants will receive a certificate for 30 hours of professional development. There is no fee to attend the workshop and participants will receive a stipend. Additional information about this program can be found on the CESAME website, [www.stonybrook.edu/cesame](http://www.stonybrook.edu/cesame)

## Outstanding Students and Teachers to be Recognized at the 39th Annual Awards Dinner in May

### Brian Vorwald, Awards Co-Chair



Each year the STANYS Suffolk Section presents an Awards Dinner at which outstanding science students and science educators are honored.

The dinner this year will be held on May 21, 2014 at the Hyatt Regency Long Island at Wind Watch Golf Club. Each high school science department from districts who are patrons of our *District Membership Services Program* nominate an outstanding graduating senior who is recognized at the Awards Dinner. At the dinner, three teachers (elementary, middle level, and high school) receive our *Science Teacher Recognition Awards* for meritorious service as science educators.

A letter will be sent in the beginning of February to all building principals inviting them to nominate a member of their faculty for recognition as a *Science Teacher of the Year*. We invite you to assist us with our **Science Teacher Recognition Awards Program** by submitting a nomination form for an outstanding science educator. You may nominate a colleague or yourself to be a candidate for recognition as a Science Teacher of the Year: 2013 - 2014. The award recipient may be either a teacher of science or a science specialist who has made extraordinary contributions to the science teaching profession. Examples of such contributions are: **(1) An outstanding teacher** - One who helps students and other teachers both inside and outside the classroom with the delivery of science programs, organizes special student programs and has achieved success with special groups. **(2) An innovative teacher** - One who successfully introduces new programs, develops or revises curricula, teaching methods or materials. **(3) A teacher serving other teachers** - One

who works through professional organizations such as STANYS, SCSTA, NSTA, BOCES, intra-school or inter-school programs, to provide ongoing help for student teachers, new teachers and veteran teachers.

To nominate a teacher for an award use the form printed on the next page and feel free to duplicate it as necessary. The form will also be avail-

**“Nominate a deserving colleague for a Science Teacher Recognition Award.”**

able on the Suffolk STANYS website at [http://](http://www.suffolkstanys.org/)

[www.suffolkstanys.org/](http://www.suffolkstanys.org/) so that it can be downloaded. You can complete it and return it as an email attachment to the address noted on the form. Once we have received this form, an application will be sent to the candidate. This will include providing more detailed information about the candidate, and instructions for including a professional resume, a personal response, and letters of recommendation. It will be the candidate's responsibility to complete all forms and obtain all required documentation. The **scoring rubric** that will be used to rate nominated candidates who submit documents for consideration can also be found on the Suffolk STANYS website.

Student award winners are chosen by their high school. Letters will be sent to all Suffolk County high schools requesting student nominations. Please see if your district is a patron of the *District Membership Services Program* and can submit a student nomination. If not please consider supporting the program for next year. ■

**SAVE THE DATE!**

**SATURDAY, MARCH 22, 2014**

**Suffolk STANYS Spring Conference at SUNY Stony Brook**

**Science Teacher Recognition Award**  
**2014 Nomination Form**  
*Science Teachers Association of New York State*  
**Suffolk Section**

Please use this form to submit a nominee for consideration for the *Science Teacher Recognition Award* and also feel free to duplicate as necessary.

**PLEASE PRINT OR TYPE ALL INFORMATION**

<b>Nominee</b>		Mr., Mrs., Ms. Dr.	First	Last	
	<b>Name</b>				
	<b>School District</b>				
	<b>School Name</b>				
	<b>School Address</b>	<b>Street</b>			
		<b>Town/Zip</b>			
	<b>School Phone</b>				
<b>Email</b>					
<b>Person Submitting Nomination</b>		Mr., Mrs., Ms., Dr.	First	Last	
	<b>Position</b>				
	<b>School Phone</b>				
	<b>Email</b>				

Please send the completed nomination form to:

**Brian Vorwald**

10 Media Lane

Stony Brook, NY 11790

Email: BVorw@aol.com



**This form must be received by March 16, 2014.**

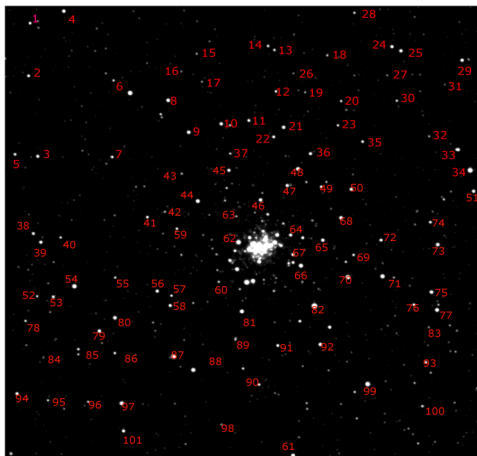
## The Faulkes Project & the Montauk School Science Program

Joe Malave, Montauk School Science Teacher

The Faulkes project is a real-time, astronomy based research and imaging project, based at Cardiff University in England, and Santa Barbara, Ca.. The latter operates as LCOGT (Las Cumbres Observatory Global Telescope Network) and is an equal partner in the project. Through this project, students can use large research grade telescopes located in Hawaii and Australia, via the internet, to image objects and conduct student research.

Montauk School became involved in the Faulkes project after Montauk School's representative of the Peconic Teacher Center (Mrs. Schilling), notified Mr. Malave (MPS's middle school science teacher) during the summer of 2010. Since joining the program, Montauk science students have imaged a planetary nebula (M97), and a pair of galaxies that are colliding (NGC 4567) and many other objects. Montauk students have worked on rebuilding a galaxy catalog called the Hickson Compact Galaxy catalog.

In addition, several students began research on determining which stars in a globular cluster are classified as Be Stars. The image below is named NGC 330.



The students use photometry to determine any variation in the type of energy being emitted by stars in this field. They use specific frequencies of light to image the cluster, then compare images and use mathematical functions to determine which stars are classified as Be stars. The time period needed to complete the project exceeded the time frame the students had, and I'm currently looking for students in other districts capable and willing to complete this project.

For general classes, teaching students about astrophotography using robotic instruments and photo-processing can be challenging and very rewarding. The following images were taken and processed by

Montauk students. Most science students get very excited about participating in this project, and this can be a terrific STEM project as well.



For further information about how to get involved, or if you have any questions, please contact me and see the following web sites:

<http://lcogt.net>

<http://www.faulkes-telescope.com> .

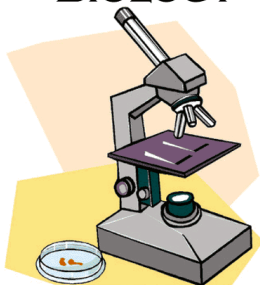
My e-mail is [jmalave@montaukschool.org](mailto:jmalave@montaukschool.org)

Happy observing, and I hope to see your school's images soon!!



## Subject Area Representative (SAR) Reports

### BIOLOGY



### Guidelines for Use of Animals in the Biology Classroom

Glen Cochrane, Biology SAR

I was recently asked to help develop research guidelines for a new science fair at the middle school level. Safety is a primary concern. Of course, as professionals, science teachers have a duty to ensure that the learning environment is safe. It is our obligation that our activities conform to a standard of conduct that will protect against unreasonable risk. I hope all teachers are aware of proper use of protective equipment, glassware, flames, chemical use and storage, etc.

I thought I would take a look for guidelines and share some links associated with those that apply to our biology classrooms. You may be familiar with the extensive international rules and guidelines associated with the Intel International Science and Engineering Fair. These ISEF guidelines are much like the reviews done at a professional level involving high school students with opportunities to work at home, school, university or other research lab. I wanted something simple that would be appropriate for New York students. That brought me to the position statement from the National Association of Biology Teachers (NABT) titled, ***The Use of Animals in Biology Education***. I found a very similar position statement at the National Science Teachers Associations (NSTA) titled ***Responsible Use of Live Animals and Dissection in the Science Classroom***. My last search brought me to the New York regulations from NYSED and found Guidelines for The Use of Animals in Elementary and Secondary Schools in the ***MST Appendices***.

Another interesting finding was the N.Y. EDN. LAW § 809: NY Code - Section 809: Instruction in the humane treatment of animals. This is a very interesting read that not only addresses the treatment of animals in schools but student rights regarding dissections.

*Dissection of animals. Any student expressing a moral or religious objection to the performance or witnessing of the dissection of an animal, either wholly or in part, shall be provided the opportunity to undertake and complete an alternative project that shall be approved by such student's teacher; provided, however, that such objection is substantiated in writing by the student's parent or legal guardian. Students who perform alternative projects who do not perform or witness the dissection of animals shall not be penalized. - See more at: <http://codes.lp.findlaw.com/nycode/EDN/17/809#sthash.0WYbg778.dpuf>*

ISEF Guidelines: <http://member.societyforscience.org/document.doc?id=398>

NABT Position: <http://www.nabt.org/websites/institution/index.php?p=97>

NSTA Position: <http://www.nsta.org/about/positions/animals.aspx>

MST Appendices: <http://www.p12.nysed.gov/guides/mst/append.pdf>

N.Y. EDN. LAW § 809: <http://codes.lp.findlaw.com/nycode/EDN/17/809>

## There Is No Such Thing As A Free MegaWatt: Hydrofracking as a Gateway Drug to Energy Literacy

Sonja Anderson, Environmental SAR

Another year, another conference and I started this year's conference at a presentation given by Don Duggan-Hass, PhD., which highlighted the fracking potential in New York State. The technology of fracking is changing and able to reach to greater depths, which has improved the natural gas potential in New York State. Dr. Duggan-Hass began with an obvious suggestion of a way to decrease our involvement in fracking: use less energy. This point has to be addressed, as any long term realistic goal about energy must include decreased demand. Dr. Duggan-Hass focused most of his lecture on slickwater horizontal high volume hydraulic fracturing of the Marcellus Shale. This was a newer technology to me. I was aware of fracking, but not to the degree the industry is able to extract natural gas from fissures in the Marcellus Shale that are held open with a grain of sand,

Let's discuss some of the issues associated with horizontal high volume hydraulic fracturing as a potential for energy in New York State. Ask yourself this question, what are the top two sources of energy in New York? Take a minute...if you said natural gas and nuclear you are in the minority of people who actually know where our energy is generated in NY. If you thought coal or hydro-power you are mistaken but you are not alone. A discouraging observation that Dr. Duggan-Hass shared was that only about 5% of the audience members he has presented to know where our energy comes from. Starting to educate people about local energy resources is a beginning to the energy discussion.

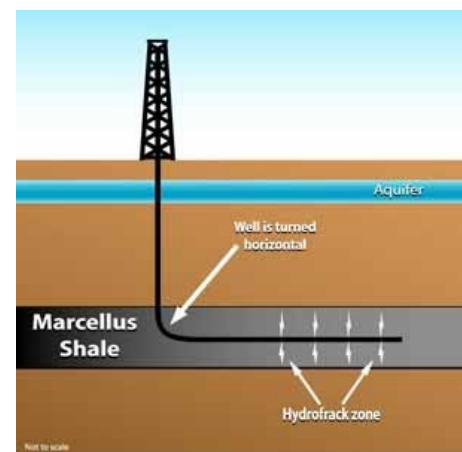
So is horizontal high volume hydraulic fracturing bad for the environment? Is it worse than other forms of energy production? That becomes the real question. Is hydraulic fracking better or worse for the environment than what we are doing or may be reasonably doing in the near future to get the energy we need?

According to the most recent estimate from the USGS, the Marcellus Shale contains about 84 trillion cubic meters of undiscovered, technically recoverable natural gas. No individual piece of the technology is new, but the combination of techniques such as horizontal, high volume hydrofracking in tight rock, is now being applied. The overwhelming majority of what goes down a well is water...plus a lot of sand, but with 4 million gallons for a typical well, if a half a percent is additives, that's 20,000 gallons of other stuff. The potential for energy extracted from the Marcellus Shale can have a significant contribution to our energy generation in New York but the real question becomes is it better or worse than other forms of energy. Most of the infrastructure of our hydroplants is

reaching the end of its life span, air quality is limiting coal and other fossil fuels and while natural gas is a fossil fuel you often hear it referred to as the "gateway" fuel to allow transition to more renewable forms of energy. We are pursuing new forms of energy and wind power has led its way into the debate. An encouraging statistic is that more power came online in NYS in 2008 and 2009 from wind than any other source; but we still have to manufacture the turbines and that takes energy that we are not yet creating from renewables.

Are we on the path to decreasing our energy consumption? Have we really exhausted efforts in this state to increase efficiencies and decrease overall usage? I don't believe so and until that is brought into the conversation should we be pursuing ways to get more energy? It's all a balancing act, but we have a responsibility to future generations to consider the long term impacts of our behaviors now. Natural gas releases half the carbon dioxide emissions of coal, but it still releases half the carbon dioxide emissions of coal; improvement, yes - solution, no. The Marcellus Shale and its natural gas can not be understood without understanding the larger energy system. I leave you with the following question: Is where energy comes from, or how much we use, more important? For more information about this topic find Dr. Duggan-Hass' presentation ***There's No Such Thing as a Free MegaWatt*** at <http://prezi.com/em-or03bprhy/theres-no-such-thing-as-a-free-megawatt-hydrofracking-as-a-gateway-drug-to-energy-literacy/>

Hope to you see you at next years conference!





## Are You in Harmony with the Global Harmonized System?

James Ripka, Ph.D., Chemistry SAR

The Global Harmonized System (GHS) will be the new standard of laboratory safety. Flinn Scientific has produced a 30 minute video that you should watch to understand these new regulations. At the end you can complete an online certification. Go to <http://labsafety.flinnsci.com/Home.aspx>. At the top of the page is a button for GHS Training. There is no charge for the video training, but they ask you to sign in. The information below (italicized) is edited from Flinn Science Department Safety Training Notes<sup>1</sup>.

The Hazard Communication Standard and the Laboratory Standard, commonly referred to as right-to-know laws, provide the regulatory foundation for awareness of chemical safety in the workplace, including schools and laboratories. Most teachers today are very familiar with the provisions of these regulations, especially how chemical hazard information is communicated on labels and Material Safety Data Sheets (MSDS).

**What Is GHS?** In March 2012 OSHA published the first major revision to the Hazard Communication Standard since its inception. In announcing the revision to incorporate what is known as GHS, OSHA stated that its goal was to transform the "right to know" into the right to understand chemical hazards. GHS stands for the Globally Harmonized System of Classification and Labeling of Chemicals. GHS is a document that establishes objective criteria for classifying and identifying chemical hazards. The overarching goal is to ensure the safe use of chemicals by providing practical, reliable, and comprehensible information on their hazards.

**Teacher Training.** Passage of the GHS provisions in March 2012 started a three-year "clock" for employers and chemical manufacturers to comply with the new requirements. The first deadline under the law is December 2013. By this date schools and school districts must provide training for teachers and staff to understand how to read GHS labels and the new Safety Data Sheets (the "M" in MSDS has been dropped). Chemical manufacturers and distributors have until June 2015 to reclassify chemicals and produce GHS-formatted labels and SDS for all new products.

**GHS Building Blocks.** GHS depends on a foundation or collection of building blocks to achieve the goals of effective hazard communication. Classification of chemicals is the starting point—GHS establishes 16 physical hazard categories and 10 health hazard categories for chemicals. (There are also environmental hazard categories, but these are not included in the revised Hazard Communication Standard provisions.) Hazard categories are assigned based on consistent, defined criteria. Within most categories GHS further distinguishes multiple hazard levels or ranks, with 1 being most severe.



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glacial, ACS reagent, 17.4 M, assay 99.7%, CH<sub>3</sub>CO<sub>2</sub>H, F.W. 60.05

**\* HAZARD ALERT:** Corrosive to skin and tissue; moderate fire risk (flash point 103 °F); moderately toxic by ingestion, inhalation, and skin absorption. Avoid all body contact. Wear protective gloves, protective clothing, eye and face protection. Avoid contact with oxidizing agents.

**DANGER!** Flammable liquid and vapor. May be harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Avoid breathing fumes. Toxic if inhaled. Use only in a fume hood. TLV: 10 mg/m<sup>3</sup>. OI-rat LD<sub>50</sub>: 3210 mg/kg.

**FIRST AID:** External: Flush affected area with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Internal: Immediately call a POISON CENTER or physician.

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**CORROSIVE TO BODY TISSUE**

**LOT:**  
**STORAGE:** Organic #1 inside a dedicated acid cabinet. Store away from nitric acid. If acid cabinet is not available store in a Flinn Saf-Cube.

**ORGANIC #1**

**DISPOSAL:** #248  
**SHELF LIFE:** Good if stored properly.

**SOLUBLE:** Miscible with water, alcohol, glycerine and ether.

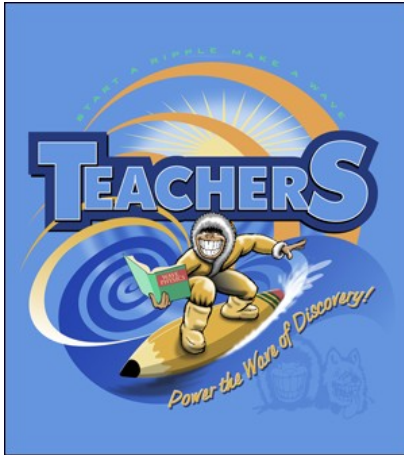
**CAS NO:** 64-19-7  
UN2789



**Discussion and Notes.** Communicating these hazards is accomplished by means of labels and SDS. There are four main GHS building blocks: pictograms (graphics or symbols) and signal words both quickly identifying the main hazards. Text-based hazard statements and precautionary statements further describe each hazard and recommended preventive measures.

**Pictograms.** These are standard symbols enclosed within a red diamond border, and there are eight different pictograms for physical and health hazards of chemicals. The choice of whether a pictogram appears on a label will depend on the objective criteria we alluded to earlier. Thus the "skull and bones" pictogram for acutely toxic will be used for chemicals with oral LD50 values less than or equal to 300 mg/kg. For chemicals having oral LD50 values in the range of 300–2000 mg/kg, the "exclamation point" pictogram will be used. Different signal words and hazard statements will be associated with these pictograms on the labels and SDS to further distinguish the hazard level or rank within this hazard category.

The new GHS labels, one of which is pictured above, contains more information on the dangers of chemicals. These labels are easier to read quickly due to the use of high visibility pictograms. I encourage you to get trained and be aware of the new system. You can be the first teacher in harmony with GHS in your school. I would like to thank Flinn Scientific for their Science Department Safety Training Notes © 2012 Flinn Scientific, Inc. Volume 13, No. 2, from September 2012. ■



## Changes in the Teacher Certification Process

Linda Padwa, College SAR

Think back to how you earned your teacher certification. Was it as simple as filling out some paperwork upon completion of your undergraduate degree program? Were you required to take any teacher certification exams? Did you have to send a video that showed you teaching one of your classes to an office at NYSED in Albany? Well, the newest set of regulations requires that teacher candidates complete all of these steps, and more.

In my last column I addressed the changes that are going into place for the teacher candidates who will be completing their certification programs in May 2014 and beyond.

The changes reflect an increased emphasis on a teacher candidate's:

- (a) general knowledge
- (b) content area knowledge
- (c) pedagogical knowledge
- (d) knowledge about how to educate all students
- (e) ability to use evidence to demonstrate student growth as a result of instruction.

These competencies will be measured by four exams:

- \* Academic Literacy Skills Test, ALST (general knowledge)
- \* Content Specialty Test, CST (content knowledge)
- \* edTPA (pedagogical knowledge and evidence of student growth)
- \* Educating All Students, EAS (modifying instruction to meet the needs of all students)

While the new requirements may seem daunting, they reflect the expectation that when new teachers enter the classroom they will be ready to implement standards-based instruction that meets the needs of all of their students. Teacher education programs have been working with this premise for years, so the new exams do not change the required competencies, but they do bring a change in how a candidate's competencies are being measured.

Three of the exams are computer based (ALST, CST, EAS) and are administered at testing centers throughout the state. However, the edTPA is a portfolio assessment. Candidates complete three tasks: (1) Planning for Instruction and Assessment, (2) Instructing and Engaging Students in Learning, and (3) Assessing Student Learning. The portfolio is assessed using 15 rubrics that measure a candidate's success in each of the tasks. Two ten-minute video clips are submitted as part of the portfolio. In these video clips the candidate demonstrates how s/he interacts with students to deliver instruction and engage students in conversations about the content matter.

Time will tell how the implementation of this new testing regimen will impact our profession. Let's hope that it will lead to teacher candidates who will be better prepared to face the challenges of teaching in the 21<sup>st</sup> century classroom.



## Resources for Earth Science and Geography Instruction (RESGI) Website

By Mark Francek



This website contains links which are organized alphabetically around the sequence of topics typically taught in an introductory earth science or physical geography class. Links are also available for environmental science, earth science/geography education, career opportunities, and more. The sites selected are based on image quality, ease with which lesson plans can be developed, organization, authenticity, scope, and format. <http://webs.cmich.edu/resgi/>

Would you like to receive a weekly e-mail featuring reviews of some of the best sites in earth science, environmental science, and geography? Contact Dr. Mark Francek ([Mark.Francek@cmich.edu](mailto:Mark.Francek@cmich.edu)) to be added to the "Earth Science Site of the Week" listserv. The sites below were taken from Dr. Francek's weekly posts.

<b>Site Name</b>	<b>Unusual Basaltic Pillars</b>
<b>Site URL</b>	<a href="http://phys.org/news/2013-10-lava-butcuriouslyno-explosion.html">http://phys.org/news/2013-10-lava-butcuriouslyno-explosion.html</a>
<b>Site Author</b>	Physics.org and Gregg, Tracy K.P. and Christle, Kenneth
<b>Description</b>	Pillars, hollow and made from basalt, likely formed in a surprising reaction where lava met water without any explosion occurring.

<b>Site Name</b>	<b>Tour the Solar System</b>
<b>Site URL</b>	<a href="http://www.pbs.org/wgbh/nova/space/tour-solar-system.html">http://www.pbs.org/wgbh/nova/space/tour-solar-system.html</a>
<b>Site Author</b>	NOVA
<b>Description</b>	For those wanna-be astronauts and space travelers out there, this interactive model of the solar system could prove to be highly addictive. With one click, you can visit Saturn, Venus, or the other planets and then spin and explore them in three dimensions. The interface uses NASA calculations to precisely position all celestial bodies. Click the play button at the bottom of the screen to watch the positions of the planets and moon change as time passes. If you're impatient, you can click ahead to see how the stars align in the year 2100.

<b>Site Name</b>	<b>Learning Modules for Weather Grades 7-12</b>
<b>Site URL</b>	<a href="http://cimss.ssec.wisc.edu/satmet/">http://cimss.ssec.wisc.edu/satmet/</a>
<b>Site Author</b>	CIMSS
<b>Description</b>	Meteorology is an excellent topic to introduce middle and high school students to geoscience, physics, chemistry and applied mathematics. Satellite Meteorology learning modules provide scientists and educators with exciting activities and hands-on tools for investigation, inquiry, analysis and stewardship.

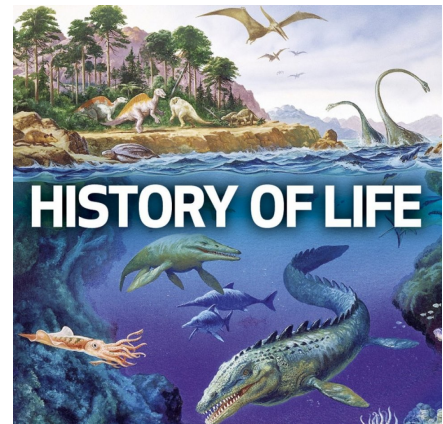
<b>Site Name</b>	<b>Ocean Lesson Plans</b>
<b>Site URL</b>	<a href="http://www.msc.ucla.edu/oceanglobe/investigations.htm">http://www.msc.ucla.edu/oceanglobe/investigations.htm</a>
<b>Site Author</b>	UCLA
<b>Description</b>	OceanGLOBE is a beach research and outdoor environmental education program with many lesson plans for upper elementary, middle and high school students.

<b>Site Name</b>	<b>Global Warming and Marathon Winning Times</b>
<b>Site URL</b>	<a href="http://www.newswise.com/articles/view/601021/?sc=swhr&amp;xy=10005215">http://www.newswise.com/articles/view/601021/?sc=swhr&amp;xy=10005215</a>
<b>Site Author</b>	Boston University College of Arts & Sciences
<b>Description</b>	Researchers in Boston University's Department of Earth and Environment recently looked into whether the effects of climate change can be found in the winning times of Boston Marathon runners. The study, titled "Effects of Warming Temperatures on Winning Times in the Boston Marathon," was published last year in the journal PLOS ONE. *

<b>Site Name</b>	<b>Interactive Earth History Timeline</b>
<b>Site URL</b>	<a href="http://johnkyrk.com/evolution.html">http://johnkyrk.com/evolution.html</a>
<b>Site Author</b>	John Kyrk
<b>Description</b>	This is not an article but it's a great timeline - from the Big Bang to the present. It's worth the time it takes to load!

<b>Site Name</b>	<b>Geoscience Career, Scholarship, and Internship Resources</b>
<b>Site URL</b>	<a href="http://www.earthsciweek.org/themebasedresources/career.html">http://www.earthsciweek.org/themebasedresources/career.html</a>
<b>Site Author</b>	American Geosciences Institute
<b>Suggested by</b>	James R. Ebert, Ph.D.
<b>Description</b>	Go beyond Earth Science Week and learn more about what Earth scientists do! Below are links to information about geoscience careers, scholarships and grants, and internship opportunities for students.

<b>Site Name</b>	<b>BBC's History of Life on Earth</b>
<b>Site URL</b>	<a href="http://www.bbc.co.uk/nature/history_of_the_earth">http://www.bbc.co.uk/nature/history_of_the_earth</a>
<b>Site Author</b>	BBC
<b>Suggested by</b>	Robert Connery
<b>Description</b>	Quality succinct description of earth history.



## Alaska, The Good, the Bad and the Ugly

Ed McDaniels – Retiree SAR

This past May, my wife and I took a cruise from Vancouver to Anchorage. I recommend cruising through Alaska to all. You will see mountains and glaciers that you can see nowhere else in the United States. We arrived at Vancouver two days earlier than we needed to in order to tour the city. Vancouver is an urban town with lots to see and do. It also has more Starbucks than anywhere else I've ever seen. While waiting to board our ship I talked with other passengers and was amazed at the high percentage who have made this cruise multiple times. They talked about the almost spiritual character of the beauty of the wilderness in Alaska.

Our cruise was the northbound half of the journey and many of the repeat cruisers were just staying on the ship and returning on the southbound half which takes a different route. In both directions the cruise ship brings you within sight of glaciers. Our particular cruise included journeys into Glacier Bay and College Fiord. Glaciers are impressive. They are huge in height and width and viewing pictures just doesn't give the scale necessary to truly appreciate them. The deep blue of the compressed ice is in stark contrast with the black and brown soil that the glacier scoured out of the land on its journey to the water's edge. The ship makes a 360 degree rotation so those sitting on their balconies can

see all the glaciers that surround the ship.

In our tour we were going to dock at Anchorage and then take a scenic train ride to Denali Park and spend a couple of days in the interior of Alaska. The National Park Service takes visitors on school buses through the park; you can't drive through on your own. I had purposely scheduled our cruise very early in May before mosquitoes become too much of a problem later in the season. Denali will have 18 generations of mosquitoes in a single season, which is far too many for someone as succulent to mosquitoes as I am. Even at this early date the ones that landed on me were the size of dimes.

From the moment you enter the park you are surrounded by wildlife. Many are used to the buses and barely stop grazing as the bus stops, so the tourists can take pictures from the windows. Even though some areas still had snow cover, wild flowers were already in bloom and carpeting the valleys. After leaving Denali, we went to a lodge near Mt. McKinley, the highest peak in North America. Understand that "near" is about 40 miles away from the mountain since there are no accommodations in the parks. The day we arrived, the mountain was hidden from view by the cloud cover and is, in fact, only visible about one day out of three. Sightings are routinely so limited that you can ask the front desk to be called, day or night, if the "mountain comes out." I got the call at 2 am and grabbed my camera since I didn't know for how long it would be visible. My wife decided



to sleep in. Understand that at 2 am in May, the sky isn't dark in Alaska. Certainly the sky was not bright, but it was much brighter than we are used to in NY. Sundown was about 11 pm and sunrise would be about 5 am. That means you have approximately 18 hours of daylight, which takes some getting used to. I stayed up through dawn and saw the stark shadows race across the mountain's sides as the sun rose higher in the sky. In the early morning, heavy mist filled the valleys between the lodge and Mt. McKinley, creating an eerie look reminiscent of MacBeth or Brigadoon. It seemed like you were staring down at cloud tops. By 9 a.m. the fog had burned off and the mountain and its surrounding peaks were crystal clear and quite imposing. You stare at this huge summit and wonder how you missed it the day before. How could something so huge not be visible all the time? Naturally, Mt. McKinley was covered with snow and its gleaming white peak made a stark contrast with the brilliant blue sky that surrounds it. It is certainly a sight to behold and one that I highly recommend to everyone.

What was the bad part? Two things: the weather and illness. I had been following the weather in the different parts of Alaska we would be visiting for the two weeks

*(Continued on page 24)*



(Continued from page 23)

leading up to the cruise. In the very beginning of May, Anchorage was 33 degrees with snow fall. As we approached our cruise, a scant two weeks later, the temperatures kept climbing and when we ended our trip and remained in Anchorage an extra day, the temperature had reached eighty degrees. We did not have any lightweight clothes with us and hit the souvenir shops to buy T-shirts to wear. They always tell you to dress in layers and that was certainly true for the cruise through the glaciers. In contrast to the high temperatures of Anchorage, it was near freezing on the water close to the glaciers. The cold of the ice seemed to make the clouds almost reach the water's surface so there was always cold, misting rain. Keeping the camera lens droplet free and focusing with heavy gloves made for challenging times. I have never gotten seasick on any cruise but this time, about three days out, I got violently ill, probably the Norwalk virus, not uncommon on cruise ships. I wasn't throwing up, the other end was involved. When we stopped at the port of Ketchikan, I got off the ship, purchased Imodium for diarrhea and just went back to my cabin to hopefully die. Twenty four hours after that I was somewhat better. As we were waiting to leave the ship for a tour to the Mendenhall Glacier, I decided to stop down at the infirmary and ask if they could recommend anything better than the Imodium I was using. Big mistake! I was immediately quarantined and basically held captive in my cabin. I could not leave for any reason. Very restricted meals were brought to my room; cleaning squads came to my cabin twice a day to sanitize every possible surface. Our regular cabin steward could not enter within these contaminated walls; I was a pariah. The next day I reported back to the infirmary and was medically cleared to join the rest of the world, free from this cautionary quarantine. Then my wife got sick, but this time we didn't go to the



infirmary, just took care of it ourselves; lesson learned.

Our journey home started from Anchorage, stopped at Seattle, then went to Boston

before we finally arrived at JFK. Our luggage did not have the same journey and some of it is still on vacation. The best they can figure is that between Boston and New York, our luggage made a break for it. It took the airline an extra day but they found my wife's errant luggage. Mine was more crafty and is still on the loose. Let me explain the process in case it ever happens to you. First, make sure you keep every bit of paper they give you along the route that deals with your travel or luggage. Even though they have every part of the trip on their computer, they will want you to recount it time and time again from your own records. They look for the missing luggage for weeks until you finally push them to the next part of the process when you must again describe the luggage but this time everything inside the luggage. They want to know what was in it, where you bought the items, when and where you bought the items and how much you paid for each of the items. They eventually made a settlement for my items, minus camera equipment and jewelry. I explained to the very nice person that I was dealing with on the phone all the steps I had taken to prevent this very occurrence. I had a bright fluorescent green strap around my blue bag, a big name tag, with my picture and contact info hanging on the outside of the bag and on the inside of the luggage. I had a neon colored 8-1/2 by 11 sheet of paper with all my home contact information with the daily location we would be and an emergency contact person as well. She thought for a moment and said, "Nope, that is pretty much everything you could have done." At least it was on the return home and not at the beginning of the trip where the consequences of lost luggage would have been more drastic. Since we were going away for almost two weeks, I had brought a lot of underwear, socks, shirts, shoes etc. for all the different settings and weather conditions that we were going to encounter. Thank goodness for the 50 pound weight limit or I might have lost even more of my stuff.

While bad things can happen on trips, they are still worth it. Get out there and enjoy and by all means put Alaska on your bucket list of places to visit. ■



## Grant Opportunities

### Funder: Toshiba America Foundation

*Program:* Classroom teaching of science and mathematics

*Summary:* Our grants fund the projects ideas and materials teachers need to innovate in their math and science classrooms. TAF is interested in funding projects designed by teachers or small teams of teachers for use in their own schools. Our grants support public and nonprofit private schools throughout the United States. Grade K-5 applications are accepted once a year on October 1st. Grade 6-12 applications for \$5,000 or less are accepted on a rolling basis throughout the calendar year. Grant requests of more than \$5,000 are reviewed twice a year. Applications for grants of more than \$5,000 are due February 1st and August 1st each year.

*Deadline:* Open

*Contact:* 212-596-0620

*URL:* <http://www.toshiba.com/taf/>

### Funder: Time Warner Cable

*Program:* Connect a Million Minds

*Summary:* Non-profit organizations and the hands-on learning opportunities they provide are often the catalyst that sparks a young person's lifelong exploration of science, technology, engineering and math. Time Warner Cable's Connect a Million Minds is always looking for exciting, new organizations we can engage in our efforts. We invite you to apply for support which includes cash grants and in-kind donations. Organizations may apply for cash support, which includes grants, project support, scholarships, etc., or in-kind support. To be eligible, your organization must provide youth (ages 11-18) access to hands-on STEM learning opportunities in after-school settings. Applications will be considered on a rolling basis.

*Deadline:* Open

*URL:* [http://](http://www.connectamillionminds.com/request_support.php)

[www.connectamillionminds.com/request\\_support.php](http://www.connectamillionminds.com/request_support.php)



### Funder: American Honda Foundation

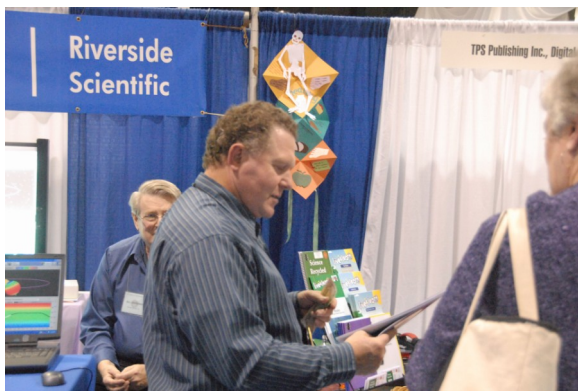
*Program:* Youth education

*Summary:* Funding priorities are youth education, specifically in the areas of science, technology, engineering, mathematics, the environment, job training and literacy. Eligible organizations are nonprofit charitable organizations classified as a 501(c)(3) public charity by the Internal Revenue Service, or a public school district, private/public elementary and secondary schools as listed by the U.S. Department of Education's National Center for Education Statistics (NCES). In addition, qualifying organizations must have a minimum of two years of audited financial statements. Awards range from \$20,000 to \$60,000 over a one-year period.

*Deadline:* Open

*Contact:* (310) 781-4090

*URL:* <http://corporate.honda.com/america/philanthropy.aspx?id=ahf>



*Suffolk members at annual conference: Gary Vorwald (above) checks out the latest science products. Right: Alice Veyvoda and Angela Lukaszewski run the exhibits.*



*BFF: Exhibit Chairperson, Angela Lukaszewski (right) with her trusty assistant, Alice Veyvoda*



**Science Matters**, formerly *Building a Presence* (BaP), is an electronic network initiated by the National Science Teachers Association (NSTA). STANYS is the lead organization in NYS. The purpose of Science Matters/BaP is to reduce isolation of teachers of science, K-16, and to keep them informed about professional development in their region, the state, and nationally. Points of Contact can sign themselves up as PoC's. The Point of Contact for his/her school receives digital information that will then be shared with colleagues. At present, there can be more than one PoC per school. It is important that you be a part of this network to receive infor-

## Science Matters to all Teachers and Students!

Nancy Ridenour

mation about grant opportunities and professional development.

Please consider being a Point of Contact (PoC) for your school. The success of this network requires all buildings to be represented. Easy step by step directions can be found at: <http://www.stanys.org/progbap.htm>

The **Science Matters** website is: <http://www.nsta.org/sciencematters/>

There are three options as a Point of Contact:

a. If you are representing all the teachers of science in your building, be sure to include all the grades, and all science subjects for teachers whom you are represent-

ing, not just what you teach.

b. If you are representing a subset of teachers in your building, be sure to include just those grades and subjects of teachers you represent, not just what you teach.

c. If you are representing just yourself, include just the grade(s) and subject(s) that you teach.

Please consider volunteering as a PoC. You will be a great resource for your colleagues and students.

If you have any questions, contact Nancy Ridenour at:

[nridenour@twcny.rr.com](mailto:nridenour@twcny.rr.com)

### GRANTS *(continued)*

**Funder:** Motorola Solutions

**Program:** Innovation Generation Grants

**Summary:** The Foundation will provide \$4.9 million in funding to U.S. science, technology, engineering and math (STEM) education programs. This year's grants will be allocated by two categories. Local Impact Grants target innovative, hands-on STEM education programs for U.S. elementary through university students and teachers. Grant requests must be between \$15,000 and \$60,000 for projects that start after June 2014. National Partnership Grants support large-scale, multi-regional STEM education programs that impact at least 150 primary participants.

**Deadline:** 30 April 2014

**Region:** Long Island

**URL:** <http://responsibility.motorolasolutions.com/index.php/solutions-for-community/com02-foundation/>

**Funder:** International Paper Foundation

**Program:** Environmental Education. Literacy. Health and Human Services

**Summary:** The two primary areas of support are environmental education and literacy. ENVIRONMENTAL EDUCATION. We are looking for programs that help generations understand a sustainable approach to business that balances environmental, social and economic needs. Given the vast nature of this subject area, the Foundation has decided to focus on: programs that coincide with content from the pbs.org website ECOinvestigators; science-based programs targeting children; outdoor classrooms at schools or in communities; outdoor science programs tied to forestry, air or water quality; programs that educate and promote recycling and composting. LITERACY. program that enhance reading materials at school and community libraries; programs that enhance the reading skills of children; programs that teach English as a second language.

**Deadline:** Open. Grants are reviewed quarterly.

**Contact:** 800-236-1996

**URL:** <http://www.ipaper.com/US/EN/Company/IPGiving/IPFoundation.html>

## SCIENCE on LONG ISLAND

### MAKE A DIFFERENCE

*There Couldn't be a Better Time to be a STANYS Member!*

**STANYS MEMBERSHIP** helps us to be the best science teachers we can be. If you are not yet a member or if your membership has lapsed, please join and become part of New York's oldest and most respected professional association of science educators!

**STANYS supports its membership through:** Networking, Friendships, and Collaboration; Professional Development Workshops; STANYS' Annual State Conference; Updates on what is Happening in Education throughout the State; State Science Congress and Science Olympiad Information; Access to the STANYS DALs and SARs; The STANYS Newsletter; E-Blasts; The Science Teachers Bulletin; Section Meetings and Updates; and Opportunities for Leadership.

Your membership in STANYS  
INCLUDES membership in the **Suffolk Section**  
—  
TWO for the price of one!

*AND the Suffolk Section of STANYS is all about Service to You, the Long Island Science Teacher!*

**Suffolk Section publishes several newsletters each year.** Each issue includes SAR articles disseminating current information in each discipline, a Chairperson's report which addresses state updates and other issues in science education, details about local science contests, workshops, and field trips, and other items of interest *specifically to Long Island educators.*

**Suffolk Section provides Conferences and Workshops** throughout the year, offering information *directly pertaining to teaching on Long Island*, presented by local experts -- classroom teachers just like you! These gatherings provide opportunities to learn more about your discipline, get information about local activities, and provide the chance for networking with colleagues. Lab activities, innovative teaching strategies and demonstrations are just part of what's offered!

**Suffolk Section offers Professional Development Hours** close to home, and *directly related to teaching on Long Island.*

**Suffolk Section hosts MATEX (Materials and Textbook Exhibit)** each October. Vendors display and discuss the latest textbooks, science equipment, and field trip opportunities. **Free Admission and Give-aways** are always a part of the program!!

**Suffolk Section holds an Awards Dinner** each May honoring outstanding **Suffolk County** high school seniors and exemplary teachers.

**Suffolk Section provides Local Leadership Opportunities** and the chance to share experiences with your colleagues *in districts throughout Suffolk.* You have an open invitation to each monthly Section planning meeting.

(Continued from page 27) Membership

**But most importantly, Suffolk Section STANYS provides us,  
as Long Island's Premier Science Educators,  
the Opportunity to Make a Difference in Education in Suffolk County!**

***The Suffolk Section of STANYS is your professional organization - JOIN US TODAY!***

Use the membership form below or join electronically using the form at the  
STANYS website: <http://www.stanys.org>

For more information, email Sheilah Schumann, Vice-Chairperson, Membership at:  
[sheilah\\_s@yahoo.com](mailto:sheilah_s@yahoo.com)

### STANYS MEMBERSHIP FORM

Please Print

Date \_\_\_\_\_ New \_\_\_\_\_ Renewal \_\_\_\_\_

STANYS ID (If known) \_\_\_\_\_

Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone (\_\_\_\_\_) \_\_\_\_\_

School/Organization \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

School/Organization Phone (\_\_\_\_\_) \_\_\_\_\_

Preferred Email \_\_\_\_\_

Subjects taught or position \_\_\_\_\_

Last year of membership \_\_\_\_\_

Section to which you wish to belong \_\_\_\_\_

Dues*	Check One	
	1-YEAR	2-YEAR
Elementary	<input type="radio"/> \$44.00	<input type="radio"/> \$82.00
Intermediate/Jr. HS	<input type="radio"/> \$44.00	<input type="radio"/> \$82.00
High School	<input type="radio"/> \$44.00	<input type="radio"/> \$82.00
College	<input type="radio"/> \$44.00	<input type="radio"/> \$82.00
Associate	<input type="radio"/> \$44.00	<input type="radio"/> \$82.00
Retired	<input type="radio"/> \$23.00	<input type="radio"/> \$42.00

**Free Student Membership**

Enrollment in a teacher preparation program is required. A letter on institutional letterhead by a college faculty member or a cooperating teacher verifying the student's eligibility must accompany this application annually.

\*Membership dues are not refundable.

**STANYS**

PO Box 2121, Liverpool, NY 13089-2121

Phone: (516) 783-5432

Web: <http://www.stanys.org>

Contact Us: <http://stanys.org/contact.html>

Rates Effective July 1, 2012

(STANYS DOES NOT ACCEPT PURCHASE ORDERS)

1/16/14

Join us for our monthly meetings. They alternate between the first Wednesday or Thursday of each month.

**Remaining Dates for**

**2014 are:**

**Wednesday, Feb 5**

**Thursday, March 6**

**Wednesday, April 2**

**Thursday, May 1**

**Wednesday, June 4**



**STANYS MEMBERSHIP FORM**

*(continued)*



**\*\*Enclosed is my tax-deductible contribution of \$\_\_\_\_\_ to:**

- STANYS Foundation
- Fellows Conference Award

**Payment Options**

Check Payable to STANYS

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Membership \$ \_\_\_\_\_

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