



STANYS

NEWSLETTER

Volume 48 Number 4

March/April 2013

President's Message



Brian Vorvald

By the time this edition of the Newsletter is published it's anticipated that the final version of the Next Generation Science Standards (NGSS) will have been nationally released by Achieve, Inc. So, with release of the final NGSS, what's next for New York State? The answer is that we now have information about an evaluation tool that has been developed by the New York State Education Department (NYSED) that will be used to compare NY State's current standards to the NGSS. It quantifies how our current standards compare to a "gold standard," which is the best we can do in delivering science to NY State's students, and uses the same criteria to rate the NGSS. Members of the NY State Leadership team, the Science Content Advisory Panel, a group of representatives of the New York State Science Consortium, of which STANYS is a member, will provide feedback using the evaluation tool. It is anticipated that pursuant to approval by NYSED senior management, a public survey will be released so that the public at large will have the opportunity to provide much needed feedback. Data from these constituencies will be used by NYSED to formulate the development of a recommendation to the New York State Board of Regents regarding the NGSS. A timeline has not yet been released, but STANYS will keep members informed via eBlast messages

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Looking Ahead...

CONFERENCE 2013

118th Annual STANYS Conference

November 3 - 5 Rochester Riverside Convention Center

Alan Seidman – 2013 Annual Conference Chairperson

Maria Mesires – 2013 Assistant Conference Chairperson

Fellow STANYS Members – Share Your Excellence TODAY

TODAY is a great day to get started in preparing to attend the 118th Annual STANYS Conference, to be held November 3 – 5 at the Rochester Riverside Convention Center. If you need to get approval from your administrator, **TODAY** would be a perfect day to get started. Remind your administrator that the STANYS Annual Conference is the best way to earn quality professional development credit in science education.

In addition to over 200 excellent workshop sessions, we will be featuring two very exciting speakers: Frank Attwood who will portray Thomas Edison, and NASA scientist Dr. Laurie Leshin, currently working on the Mars Rover, Curiosity project.

Conference Workshop Proposals – www.stanys.org

The workshop proposal submission process for the 2013 Annual STANYS Conference **IS NOW OPEN!!!!**

Workshop sessions are available on Sunday, November 3; Monday, November 4; and Tuesday, November 5, 2013. The deadline for submission of proposals is May 15. To submit proposals, go to <https://www.vishost.net/stanys-net/proposal13/index.cfm>

Disclaimer: Not all proposals will be accepted. Proposals that address the theme and mission of the Conference, as well as proposals from registered participants, will be considered first. Unregistered presenter proposals and those that do not directly address the Conference theme will be considered on a secondary basis.

Not only is **TODAY** a great day to plan to attend the Conference – it is the perfect day to submit a proposal to present a workshop at the 118th Annual STANYS Conference. In keeping with President-elect Fran Hess's theme 'Collaborating for Excellence in Science Teaching', take a look through your curriculum material, your best teaching methods, or your favorite applications of technology to teaching, and submit a proposal to share your expertise with your peers. Go to conference.stanys.org and follow the links to the Annual Conference.

TODAY...

is a great day to take a giant step toward becoming one of New York State's science education elite!

Please see the Conference proposal site for further information.

Need some suggestions for workshop topics?

How about.....

- Engineering at the Elementary level
- Marcellus shale - what's going on?
- Technology for Intermediate level
- Found any new APPs lately?
- Forensics - always popular!
- NGSS -practices and integration
- Physics topics - all levels!

For more ideas, check out list of suggested topics submitted by participants at Conference 2012. You'll find it on page 8.

President's Message

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I'm pleased that this year we've been able to restore holding the New York State Science Congress at which winners from regional competitions will be able to compete in a friendly and collegial atmosphere. The event is being hosted by the STANYS Suffolk Section with Section Chairperson Glen Cochrane serving as the 2013 Congress Director, and will be held at Long Island's Brookhaven National Laboratory on June 8, 2013. I am grateful for the support of the Board of Directors that allowed us to move forward with planning the event. In January, the Board approved a plan that will provide funding for the event this year. The future of the event in subsequent years will be contingent upon support from the regional science congresses so that the state event will become self supporting. Read more about this year's congress in the article that appears elsewhere in this publication.

I recently participated in several meetings at which your STANYS leaders have been working on efforts to serve our membership and the educational community at large. It's very gratifying that so many people support our organization by taking time from their busy professional and personal schedules to travel to these meetings and plan activities and various strategies that support science teachers in their classrooms.

On Saturday, March 9, the STANYS Directors at Large (DALs) and Section Subject Area Representatives (SARs) met at Union Endicott High School. They first assembled for a general meeting during which they were updated on the status of the Next Generation Science Standards and informed about submitting workshop proposals for the 118th Annual STANYS Conference in November. College DAL Dr. Thomas O'Brien delivered a short presentation on the Innovating Instructional Ideas Initiative that will provide members resources to be made available on the STANYS website. A session was scheduled during which all SARs meet with their DALs to discuss topics that included the NGSS, workshop proposals, and the website resources. Following this session participants had the opportunity to attend two workshops that were presented by several of the DALs. I'd like to extend thanks to Kathy Hoppe, DAL for Professional Development for planning and coordinating the meeting, Sections DAL, Polly Peterson, for making all facilities arrangements

at the high school, and to Past-President Fred Pidgeon for coordinating all lodging arrangements at the Best Western in Johnson City.

On the following weekend the Conference Committee met in Rochester for their annual post-Conference meeting. From this meeting recommendations were made for inclusion in the planning of the next Conference, which is already well under way. With the outstanding leadership of Conference Chairperson, Alan Seidman, and Assistant Conference Chairperson Maria Mesires, we will once again have an outstanding Conference in the fall. So much goes into the planning of this large and important event and we are indebted to the members of the Conference Committee, all of whom devote endless hours of their time to insure that it is so successful each year.

Our website committee has been working to fully develop the capabilities of our new website. Under the guidance of temporary Chairperson Gene Gordon and STANYS Vice President Jason Horowitz, we are moving forward in realizing the goals we established for the website in better serving our members. Website Committee members met in Rochester in March to further this important work.

We are now accepting workshop proposals for the 118th Annual Conference which will take place November 3-5, 2013. Please consider being a presenter. Dr. Fran Hess, our current President-elect, has selected "*Collaborating for Excellence in Science Teaching*" as the overarching theme for the Conference. This theme has three subsets, "Excellence in Curriculum," "Excellence in Teaching Methods," and "Excellence in Teaching Resources & Tools." The strength of our Conference is the sharing of teaching practices in the classroom with each other. We have so many talented teachers throughout our state and being a presenter will provide the opportunity to share the great things you're doing with your students with your colleagues and to interact and network with other participants. You'll come away from the Conference invigorated and full of new ideas. Proposal submission forms are available at STANYS.org and must be submitted by May 15th.

I've provided just a snapshot of activities STANYS leaders are performing in support of the STANYS membership and science education community at large. We have a vibrant group of people who tirelessly use their expertise and give up their time to advance science education. We owe all of them a huge THANK YOU!

STANYS Mission Statement

The Science Teachers Association of New York State (STANYS) promotes excellence in science education.

Its mission is to work with educators and communities to provide opportunities for ALL students to participate in and learn science.

Goals

- **Student centered education that excites and invites participation by all students will be the prime focus of STANYS supported activities.**
- **A collaborative/partnership relationship will be maintained with other professional and community organizations.**
- **A communications network will be maintained including: telecommunications, newsletter and other publications.**
- **Exemplary programs and effective teaching practices based on tested research will be identified, recognized, modeled and promoted.**

As members and future members of STANYS, it is important to reflect upon both the mission statement and goals of our organization. It is up to all of us to promote these because STANYS is OUR organization. The success of STANYS depends upon the successful teaching strategies, energy, professional commitment, and mentoring exhibited by each of its members.

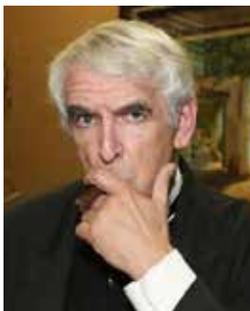
The *STANYS Newsletter* is an official publication of the Science Teachers Association of New York State, Inc., P.O. Box 2121, Liverpool, NY 13089, website: www.stanys.org.

It is published five times during the school year: October, December, February, April and June. Articles and photographs for publication, and/or requests for information regarding advertising in the *STANYS Newsletter* should be sent to: Alice Vevoda, Editor, 17 Tall Tree Lane, Smithtown, NY 11787, e-mail: alvevoda@optonline.net.

Opinions expressed herein are those of the authors and may not reflect STANYS policy.

STANYS has a line-up of excellent speakers for the 118th Conference!

By Joan Wagner, Speaker Coordinator



Sunday night, November 3, 2013, you will be treated to the KEYNOTE ADDRESS given by **Dr. Laurie Leshin**. Her talk will provide an update on the work of the Mars Rover, Curiosity, which landed on the Mars Gale Crater on August 5, 2012. Dr. Leshin is a member of two instrument teams for the Mars Science Laboratory Curiosity Rover mission. Presently, Dr. Leshin is the Dean of the School of Science at Rensselaer Polytechnic Institute. Prior to joining Rensselaer, Dr. Leshin served for 6 years as a senior executive at NASA, working on both the science and human exploration programs. Dr. Leshin's scientific expertise is in cosmochemistry. She is primarily interested in deciphering the record of water on objects in our solar system. Having heard Dr. Leshin talk, her enthusiasm for what she does is contagious. The International Astronomical Union recognized her contributions to planetary science with the naming of asteroid 4922 Leshin.

Monday evening's FELLOW'S ADDRESS will be given by **Thomas Edison** (aka Frank Attwood). It was hard tracking him down and getting his email, but Frank Attwood keeps in close contact with him. Edison talks about his life from boyhood and through his struggles and successes as an inventor, industrialist and businessman. Excellence is the theme of this year's Conference. STANYS President-elect Fran Hess uses this Edison quote in all of her email signatures:

*Excellence is the result of caring more than others think is wise,
Risking more than others think is safe,
Dreaming more than others think is practical, and
Expecting more than others think is possible.*

After semi-retiring from two real estate brokerages in Central Florida, Attwood felt that he wanted to make a living by making a difference. This vision resulted in developing and publishing the first educational handbook for relocating families seeking the best schools for their children. Following the sale of the publication, Attwood began the Edison performances that educate, inspire and entertain audiences of all ages. His Thomas Edison portrayals have also led to numerous presentations for businesses, schools, universities and entrepreneurs.

The human element is often neglected when we teach science. Learning about the people and the struggles of our scientists, inventors and engineers gives science the human quality that makes it more appealing to the learner. Many of you enjoyed the portrayal of Madam Curie at the last Conference, and now you will have the chance to listen to Thomas Edison.

Invited Speakers

Invited speaker **Dr. Bruce Monger** is a senior research associate in the Department of Earth and Atmospheric Sciences. His talk will center on the fundamentals of climate change and its impact on the ocean. He also would like to share his teaching strategies that turn on non-majors to science. In his introductory oceanography class, he asks students to take ownership of the problem and act on what they have just learned in the class about climate change by becoming civically engaged and writing letters to their congressional leaders asking for action. He feels this approach empowers students and lets them see how they can actually use the information they learned in the class to make a better world. This class is very popular; he expects an enrollment of over 750 students next fall.

Invited speaker **Dr. Ricki Lewis** is a science writer and genetic counselor. Her talk will focus on her recent book, *The Forever Fix: Gene Therapy and the Boy Who Saved It*. Gene therapy is slowly becoming a viable treatment for genetic diseases. "On a bright fall day in 2008, 8-year-old Corey Haas walked up to the Philadelphia zoo with his parents. He heard kids chattering about the hot air balloon above, so he looked up, and screamed. It was the first time he'd seen the sun. Four days earlier, doctors had sent gene-bearing viruses into Corey's left eye to treat his hereditary blindness, and now the sun was unbearably bright." Dr. Lewis states, "The saga of gene therapy celebrates science, medicine, parent activism, model organisms, and pioneering researchers, many of them women. It is an ongoing story of science and hope."

Invited speaker **Dr. Jennifer Francis** is a research professor at the Institute of Marine and Coastal Sciences, Rutgers University. Dr. Francis will explain how climate change is impacting weather. New research is showing a relationship that may explain some of the crazy weather conditions we are experiencing.

Invited speaker **Dr. Warren Allmon** is the Director of the Paleontological Research Institution (PRI) in Ithaca, NY and the Hunter R. Rawlings III Professor of Paleontology in the Department of Earth and Atmospheric Sciences at Cornell University. His talk will focus on how climate change has impacted species on our planet.

Please feel free to email me suggestions for Conference speakers or topics you would like to hear.

Send to: Joan Wagner, jsw2012@aol.com.

Finger Lakes STEM Hub Recognizes Young STEM Videographers at April 30 Gala

Student-produced education videos involving science, technology, engineering and mathematics (STEM) from area schools will be honored at the STEM You Can Video Contest Awards Gala, taking place April 30 at 6 p.m. in the Patricia F. Hale Hands-on Gallery at Rochester Museum & Science Center, 657 East Avenue. Visit www.rmssc.org or http://www.empirestem-fl.org/students/Video_Contest_Awards_Gala for tickets and information.

Local news anchors Don Alhart, associate news director at 13WHAM-TV, and Helene Biandudi, educator reporter/producer at WXXI News and TV, are co-hosts of the event. Organized by the Finger Lakes Hub of the Empire State STEM Learning Network, the gala dinner includes viewing the 17 video entries with awards presented to student teams in three categories: grades 3-6, 7-9, and 10-12.

STANYS and NYSSELA are members of the Finger Lakes STEM Hub Steering Committee and are participating in the preparations for this gala event. Guests will enjoy live music by the Gregory Street Blues Band, a buffet dinner, and experience the Bathysphere Underwater Biological Laboratory (BUBL), a key component to Monroe #1 BOCES science program.

To promote awareness for education in science, technology, engineering, and mathematics (STEM), students from area schools in a nine county region produced and submitted

three-minute videos featuring their fun interpretations of composting, electricity, physics, global warming, robotics, and other topics. To select the winners, a panel of local judges included:

- Dr. Matthew Augustine, former CEO of Eltrex Industries and current CEO of BioDrill, Inc.;
- Film columnist Jack Garner of the Rochester *Democrat and Chronicle*;
- Bonnie Garner, Monroe #1 BOCES retiree, and a volunteer coordinator of the Challenger and *Bathysphere Underwater Biological Laboratory (BUBL)* programs at RMSC;
- Karen Iglesia, CEO of Iglesia Education Centers, and founder of the Infinite Horizons Charter School; and
- Glenn Johnson, chief meteorologist on 13WHAM-TV.

Sponsors of the gala and program include Time Warner Cable, Xerox Corporation, Rochester Museum & Science Center (steward of the Finger Lakes STEM Hub), Corning, Ward's Science, Finger Lakes Advanced Manufacturers Enterprise (FAME), BioDrill, Greater Rochester Quality Council (GRQC), and New York State Science Education Leadership Association (NYSSELA).

Finalists in the competition will be guests at the NYSSELA Luncheon during the 118th Annual STANYS Conference in November, 2013.

ECOLOGY WORKSHOPS

for your summer enrichment

There are some ecology workshops coming up, both this spring and in the summer. All are being held in the mid-Hudson Valley; housing is available for summer courses. Registration is filling up!

Summer workshops

(<http://www.caryinstitute.org/educators/professional-development/summer-institutes>)

Ecology in Context – Teaching Stream Phenology July 22-26

This course, available for graduate credit, combines an in-depth study of stream invertebrates with phenology to explore how stream ecosystems will respond to a changing climate.

Using Gardens to Teach August 20-22

In collaboration with the Poughkeepsie Farm Project, come learn how to incorporate gardens into your classroom, including math, nutrition, science, and writing skills.

Contact me with any questions, or visit our website to find out more

harrisc@caryinstitute.org

Cornelia 'Lia' Harris

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845-677-7600 x321 Fax: 845-677-5976

Join or renew your **STANYS membership!**

TWO-FOR-THE-PRICE-OF ONE – one dues covers local and statewide

www.stanys.org

KATHY HOPPE Named a 2013-14 Einstein Fellow

STANYS Director at Large for Professional Development, Kathy Hoppe, has received the high honor of being selected for the 2013-14 Albert Einstein Distinguished Educator Fellowship Program. On March 26, the Triangle Coalition announced that she is one of 27 science, technology, engineering, and mathematics (STEM) educators who will serve in Washington D.C. for 11 months beginning September 1, 2013 at sponsoring agencies. The program is a paid fellowship for K-12 STEM educators who have demonstrated excellence in teaching. The aim of the program is to increase understanding, communication, and cooperation between the legislative and executive branches of the government and the STEM education community.

Kathy, who teaches at the Monroe 2-Orleans BOCES in Spencerport, was selected through a rigorous application and interview process from nearly 200 applicants. She will serve at the National Science Foundation's Director for Engineering (ENG), Division of Engineering Education and Centers (EEC).

Congratulations to Kathy on receipt of this honor and exciting opportunity to continue advancing STEM education!



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STANYS Teacher Award Opportunities

Glen Cochrane, Chairperson, Conference Award Committee

We are looking for teachers to submit applications for several awards for teacher recognition. These awards are presented at the next STANYS Conference in November.

The *Excellence in Science Teaching Award* honors one elementary, one intermediate, one high school and one college educator each of whom 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 2013, have never attended the STANYS Conference, be a member of STANYS (upon application), attend this year's full Conference, submit 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 Science 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 effectiveness 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.

More in depth information about these awards can be found on the STANYS website, www.stanys.org. 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 find not only more information, but also a link to the application entry form as well as the rubric by which all applications are compared. You may also contact me with any questions or for more information: 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 15, 2013. 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!



GRANTS

Joan Wagner, STANYS Grant Chairperson

If you are looking for ways to fund school projects or lessons in your classrooms, grants are an excellence resource. Each month, STANYS provides a list of potential grants, Federal, State and private foundations. There is usually something to meet a wide variety of needs. Nancy Ridenour, a member of the grant committee sends out announcements via, "Science Matters." Grants are also listed on the STANYS website.

Informal Education

Joan Wagner, Committee Chairperson

Schools should be forming strong partnerships with Museums or science centers. Often, the resources museum/science centers have to offer are underutilized. Find out what is in your community. Does your STANYS Section have an Informal Education liaison to a local museum? If not, here is one way to become involved.

In Schenectady, NY, a beautiful metamorphosis is taking place. Schenectady Museum is becoming a Science Center. As part of the metamorphosis, its name has been changed to the Museum of Innovation and Science (miSci). On May 3, the Eastern Section of STANYS and miSci will be hosting a "Grownups Night at the Museum." It will be open to science teachers and anyone else who wants to go. The IBM "Think" exhibit will be there along with exhibits from the Los Angeles Exploratorium. Three planetarium shows will be offered and the Dudley Observatory will have some telescopes outside for night viewing. If you would like to attend go to: <http://www.eastern-stanys.org/?page=events&id=12>.

Be part of STANYS! **BECOME A MEMBER or RENEW YOUR MEMBERSHIP**

Choose the method you prefer:

Sign up online
with a credit card.

You're done!

Mail in
a membership application.

Write a check payable to STANYS or include your credit card information.
Mail to: STANYS Office, PO Box 2121, Liverpool, New York 13089-2121

Fill out and download
a membership form.

STANYS State Science Congress

Glen Cochrane, Suffolk Section Chairperson

STANYS State Science Congress is back on track for another year. This is a premier event available to the top student research projects nominated from STANYS affiliated regional science fairs.

This year, the event will be hosted by the Suffolk Section on June 8, 2013 at Brookhaven National Lab in Upton, NY. The day will begin with an opening ceremony, a morning of judging by BNL scientists, tours of some BNL facilities, and an awards banquet in the evening. For students traveling from outside the area, rooms have been made available at a discounted rate in the same hotel hosting the Awards Banquet.

For those unfamiliar with the State Science Congress, it is open to students in grades 6-12 and divided into Junior and Senior Divisions. This year, the students will make an oral presentation supported by a poster followed by an opportunity for judges' questions. They will be evaluated in a friendly atmosphere on the quality of their work, as revealed by their poster presentation and their conversation with the judges. Recognition is earned as Highest Honors, High Honors, Honors, and Honorable Mention.

The STANYS Suffolk Section is extremely grateful for the financial support this year from the STANYS Executive Board. This one year grant is their contribution to give the top students from STANYS affiliated science fairs a chance to visit a National Laboratory, present their outstanding research, and socialize with other teenagers of similar interests. It is our hope that in future years, the STANYS State Science Congress will be supported by the regional science fairs so we can continue to offer our students this valuable experience.

STANYS Annual Conference
November 3-5, 2013
Rochester Convention Center
www.stanys.org

Section VII: Professional Growth

Maria Mesires, Assistant Conference Chairperson

Every teacher in New York State has heard about THE TEACHING STANDARDS. Those seven standards that you must attain in some way, shape, or form. Those standards on which some of our evaluations that deem us as qualified professionals are based. With our ever increasingly busy lives as educators, how do we fit in professional growth? I am sure that your district is attempting to provide some, but are they really providing you with what you need to be an EXCELLENT teacher of science?

One way to demonstrate that you are achieving Standard VII: Professional Growth is to attend the 2013 STANYS Annual Conference in Rochester, NY. By attending the Conference, even for ONE DAY, you will gain knowledge and experience that targets elements 2, 3, and 4 of that standard. The information that you glean from a Conference can be taken back to your district and shared with other teachers (and this will also fulfill Standard VI: Professional Responsibilities and Collaboration, Element 2).

If you have never attended a STANYS Conference before, this is your opportunity to engage in collegial growth and make friendships that last a lifetime. You will have the opportunity to attend dozens of different workshops that target every aspect of science education. In fact, I challenge you to find any session time where you don't find more than one workshop that

appeals to your interests or curriculum of your classroom. We have invited speakers from all disciplines to share their interests. What a way to help your students build real world connections than to come back and tell them what is going on right now in the world of science. We have exhibitors, prize drawings, swag, and food!

What about cost you might ask? We know this is a challenge right now with budget cuts. However, many of our Conference attendees find our Conference so valuable that they pay out of their own pocket to attend. They do this because they know that when they come to a STANYS Conference they will get the professional development that they need to be EXCELLENT teachers of science. They know that only STANYS can provide this for them. Come and see and talk to these teachers. Ask them why they make the journey every first weekend of November year after year.

For those of you who are Conference regulars—thank you for making the trip every year and we can't wait to see you in November. We hope you enjoy our line-up this year. For those of you who have never made the trip—please consider coming for a day and seeing all that we have to offer to you, and the support you are given for your personal growth as a quality teacher of science.

**LAST CHANCE TO SEE YOURSELF IN PRINT—
(this year!)**

The final issue of the Newsletter for this publication year is ready to accept articles!

May/June Issue

ALL Newsletter material **MUST** be to the Editor by May 12, 2013
(alveyvoda@optonline.net)

ATTENTION SECTION CHAIRPERSONS!!

Tell all your colleagues about a great place to visit in your Section! You have all those summer days with time on your hands... so relax and enjoy the local wonders. Check out sites for field trips

Tell us who won your service award...or put on a great workshop... or should be congratulated for some great feat of scientific pedagogy!

WE WANT TO READ ABOUT YOU!

ATTENTION TEACHERS!

Ideas for STANYS Conference Workshop Proposals

The STANYS Conference Committee just met and reviewed the many suggestions suggested by last year's Conference attendees. The following are some ideas that might interest you for presenting next November.

Workshop sessions are available on Sunday, November 3; Monday, November 4; and Tuesday, November 5, 2013. The deadline for submission of proposals is May 15. To submit your proposals, go to <https://www.vishost.net/stanys-net/proposal13/index.cfm>

Suggestions:

- More next year on NGSS once we know about them (assuming SED adopts them)
- More interdisciplinary ELA for high school topics
- The 2012 Conference had an environmental focus. I would like more physics speakers
- More hands on or literacy activities to use in your classroom
- More forensics topics!
- More elementary topics!
- More about engineering at elementary level.
- Pedagogical ideas to meet the current NYS assessments and teacher assessments.
- More workshops on using data effectively in the science classroom.
- Any technology for Intermediate level
- Apps to teach science
- How to structure units as PBL
- Middle school inquiry
- Using your pre & post test data.
- SURVIVAL IN THE TIME OF CHANGE –Common core, NGSS, APPR
- How Districts are implementing changes to their curriculum to meet NGSS at the Elementary Level
- Information on the new assessments, and best practice to prepare students.
- Continue with NGSS literacy in the science classroom
- More about NGSS: how to balance standards & science theory with practical presentations
- Plenty of presentations for elementary teachers!
- More on Next Generation Science Standards and Integrating the Common Core
- Classroom specific science presentations
- There isn't enough for retirees!!
- The Marcellus shale speaker was cancelled last year – please see if he can be rescheduled
- Statewide Peer Review training
- What plans do the big elementary curriculum providers like STC or FOSS have to meet NGSS Standards?
- Flipped Classroom
- PLATO Science Modeling
- More SMART board applications (but not given by people who are selling something!)
- More on sustainability, climate change. Invite someone from the College Board to address changes in AP curriculums, particularly AP Biology.
- More opportunities to meet with someone from NYSED about changes and how they relate to science teachers - APPR, Evidence Collection, SLOs, LAT, etc.
- Lab Share-A-Thon (all disciplines)
- IRON TEACHER-STEM Edition (for each discipline)
- Elementary STEM share-a-thon
- Workshops for administrators and/or teams of teachers with an administrator
- Elements of an effective science class
- Elements of an effective lesson
- Planning for the potential changes in curriculum with NGSS
- Integration of ELA and Math with support of science
- College and career prep with STEM
- Neurobiology
- Human genetics

SUMMER
@ Rensselaer Institute
40+ contact hours
Space Science and Next Generation
Science Standards (NGSS)

The NRC New Framework for Science Education places more emphasis on astronomy and Earth Science. It is being considered by NYS and 28 other states as the Common Standards are being drafted.

Advances in imaging the interior of Earth have caused us to revise our ideas about how Earth formed and is evolving. Satellites and powerful telescopes such as the Hubble have brought surprising new information about the universe. This free, 5-day summer institute for teachers of science (elementary – high school) will strengthen your content knowledge of astronomy and help you and your school develop curriculum for astronomy and planetary geology. The institute includes engaging lectures by cutting-edge researchers, teaching strategies, hands-on classroom activities, and solar and night-time observing. You will also be certified to borrow actual lunar rocks!

Topics covered:

- Formation of the Universe
- Stellar Evolution
- Planetary geology
- Motion in the Universe
- Telescope observing (two evenings, depending on weather)
- Solar observing
- NASA certification to borrow Moon rocks
- Climate Change (new topic for this year)
- Teaching strategies to enhance delivery of curriculum

This institute is made available to teachers by Dudley Observatory and RPI through NASA and NSF grants. Participation is free. Dorms will be available for those from out of town for a very reasonable cost. Free lunch and morning snacks will be provided each day. Participants will receive both hard and electronic resources to use in their classroom plus some equipment for their classrooms.

Continual support for the teaching of astronomy will be provided through a Dudley Observatory forum. Download your application here: <http://www.dudleyobservatory.org/Education/Summer2013.html> or <http://summer.rpi.edu/update.do?artcenterkey=77>

Please feel free to contact Joan Wagner (focuseonlearning1@aol.com) for more information. Applications are due by April 30th. **SO HURRY!!!**



STANYS NEWSLETTER

2013-14 Deadlines

ISSUE: **September/October**
 COPY DUE: **JULY 1, 2013**
 TARGET DATE: **September 1**
 CIRCULATION: **statewide**

ISSUE: **November/December**
 COPY DUE: October 31, 2013
 TARGET DATE: December 1
 CIRCULATION: membership

ISSUE: **January/February**
 COPY DUE: December 31, 2013
 TARGET DATE: February 1
 CIRCULATION: membership

ISSUE: **March/April**
 COPY DUE: February 28, 2014
 TARGET DATE: April 1
 CIRCULATION: membership

ISSUE: **May/June**
 COPY DUE: April 30, 2014
 TARGET DATE: June 1
 CIRCULATION: membership

“Plan ahead” is a motto that makes for the best class lessons, and for the best Newsletter articles! Plan your articles about Section activities, great lesson ideas, field trips not to be missed, special learning sites in your area and don’t forget photos! **PHOTOS ALWAYS WELCOME!** Permission of people in the photo (or parent or guardian permission if subject is a minor) is needed for STANYS publication. Send **HIGH-RES** photos as separate files, preferably .JPG files.

Editor: Alice Veyvoda, 17 Tall Tree Lane, Smithtown, NY 11787. Email: alveyvoda@optonline.net. Don’t forget the **PICTURES!**



What Can Membership in STANYS Offer You?

- An excellent annual state Conference. We offer many workshops for all teaching levels and disciplines, vendors with a wealth of new products, stargazing, socials, keynote speakers, and much more
- Five annual issues of the STANYS Newsletter. We bring you updates from NYSED, Conference information, professional growth opportunities, and other news you can use.
- The Science Teachers Bulletin, a publication featuring articles written by and for members. Philosophical issues, educational methodologies, and information about STANYS Fellows are presented.
- Networking with other professionals in your discipline for friendship and collaboration.
- Statewide representation through the STANYS Board of Directors. Your elected Section officers conduct the business of the organization and voice your views.
- Access to the STANYS Directors at Large (DAL) and Section Subject Area Representatives (SAR). These leaders provide updates and present workshops at the Section and state levels.
- Legislative updates at the state and national level. No Child Left Behind legislation will continue to influence us at the state and local levels.
- A voice in legislative affairs that affect science teachers and the teaching of science. STANYS brings our collective concerns and suggestions to NYSED or the state government.
- Section meetings and activities. Sections of STANYS provide news, workshops, and opportunities for local leadership. Some Sections offer regional educational events for students.
- Recognition through awards such as Excellence in Teaching for Outstanding Elementary, Middle, High School and College Science Educators, Fellows New Teacher Conference Award, STANYS Fellow, and Section Service.
- Information for you and your students about the STANYS sponsored state-level Science Congress and other events such as Science Olympiad.
- STANYS Foundation grants to support enrichment opportunities for students or teachers.
- Opportunities for leadership in the organization at the Section and state levels.
- Representation through elected leadership to the National Science Teachers Association (NSTA).
- Timely announcements via “Science Matters” (formerly Building a Presence), a nationwide NSTA initiative. Targeted electronic communication in each school building is being organized through Points of Contact (PoC).
- Information about STANYS and summary of benefits may be found in the [STANYS TRIFOLD 2013](#) (pdf). We encourage you to print copies and distribute widely among New York science educators.

BECOME A MEMBER OR RENEW YOUR MEMBERSHIP NOW!
 Go to www.stanys.org for application forms.

NGSS – Final Version Has Arrived

The final version of the NGSS is available online at <http://www.nextgenscience.org/next-generation-science-standards>.

Please note that the NYS Board of Regents has not yet rendered a decision regarding the adoption/non-adoption of the NGSS as New York State’s science learning standards.

Will Jaacks, Associate in Science Education, Office of Curriculum and Instruction
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Office of Curriculum and Instruction Home Page - <http://www.p12.nysed.gov/ciai/>

ESP and The Next Generation Science Standards (NGSS)

New Standards for K-12 Science Curriculum Will Shift Lessons for Many Schools

With the release of the highly-anticipated final version of the NGSS, it is now up to each state to determine whether they will adopt those standards. Pending New York State (NYS) Education Department and Board of Regents adoption of the NGSS for NYS schools, the Elementary Science Program (ESP) will be prepared to provide materials that support the new standards. As part of Monroe 2-Orleans BOCES, ESP is poised to redevelop its K-5 Program to become Grade Level and Content Area specific. For example, the new K-5 ESP Curriculum will include a Life Science Unit, Earth and Space Sciences Unit and Physical Science Unit at each grade level.

ESP will involve NYS educators across all grades, K-12, in the process of writing and trial testing the units, with special emphasis on the expertise of the grade level teachers. These new NGSS-aligned units will be fully correlated to the Common Core Learning Standards for ELA and Math, a major emphasis in curriculum across all grades and subject areas.

Additional anticipated resources for the units include content at various Lexile reading levels, interactive whiteboard lessons, formative and summative assessments, and videos to accompany units for both student and professional development purposes. The units will fully incorporate Science and Engineering practices as well as Cross Cutting Concepts as the NGSS intended.

The units will be a complete elementary science curriculum designed to comprehensively address the NGSS. Release dates for the kits is to be determined pending adoption of the NGSS by New York State. If it is confirmed, it is likely that

the changes would take effect for the 2014-2015 school year. Kathy Arminio, Director of ESP, noted "ESP has been following the development of these standards very closely. We will help teachers understand the impact of the NGSS on their curriculum, and we will develop materials to use that meet these standards."

About the Next Generation Science Standards (NGSS): Through a collaborative, state-led process managed by Achieve, new K-12 science standards are being developed that will be rich in content and practice, arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education. The NGSS will be based on the Framework for K-12 Science Education developed by the National Research Council. Visit www.nextgenscience.org for more information.

About the Elementary Science Program

The Elementary Science Program (ESP) of the Monroe 2-Orleans BOCES provides a hands-on, interdisciplinary curriculum that converts the classroom into a science laboratory. The curriculum is correlated to New York State Learning Standards for Mathematics, Science and Technology, specifically the Elementary and Intermediate Core Curricula. The program emphasizes student-centered investigations. It is hands-on, inquiry-based, and includes interdisciplinary connections to math and language arts standards. Further details are available at www.espsciencetime.org.

For more information, contact Kathy Arminio, Director, Elementary Science Program, (585) 352-1140.

WATER CYCLE...?

It's Elementary (and Middle Level, too!)

The U.S. Geological Survey (USGS) and the Food and Agriculture Organization of the United Nations (FAO) have teamed up to create a water-cycle diagram for kids in elementary and middle schools. It is available in a number of languages.

<http://ga.water.usgs.gov/edu/watercycle-kids.html>

Howard Perlman US Geological Survey hperlman@usgs.gov 678-924-6678

Children in the Stream

A Unique Interdisciplinary Approach!

This summer, from June 24 - 27, 2013, we will offer our second Children in the Stream Conference. Last year's conference was a huge success and you can go to <http://www.childreninthestream.com/the-2012-children-in-the-stream-conference.html> to read more about the four-day event. This is the only national four-day conference that trains adults on how to use fly fishing as the foundation for incorporating science, math, English language arts, visual arts and community outreach into the curriculum or into a youth program. The program is set up so that each participant can customize their own program when they return home.

As part of the \$350 conference fee, each participant will receive the following:

- experiences, background knowledge, and resources for obtaining materials and equipment needed to start their own interdisciplinary school or community based youth fly fishing program.
- buffet breakfast, lunch and dinner for the four conference days
- fly rod and reel outfit
- fly tying kit
- one time start-up wholesale discount voucher for purchasing fly fishing equipment for waders, boots, rod reels, etc.
- one time start-up wholesale discount voucher for fly tying equipment
- sketchbook / journal and felt tip pen
- Instructional field guides
- Children in the Stream bibliography of fly fishing related literature for elementary, middle and high school students.

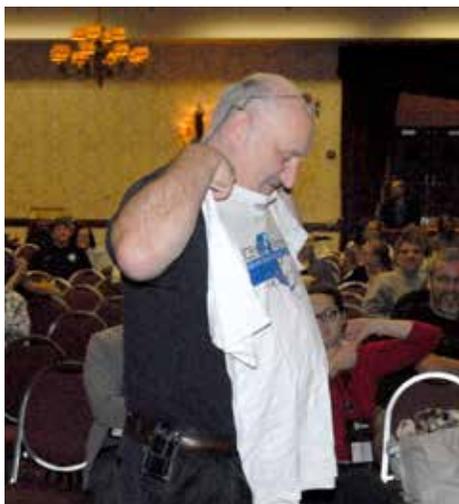
We encourage you to register for our very unique conference. To provide individual quality instruction, there is a small number of participants accepted for each conference on a "first come, first serve" basis. Please register at <http://www.childreninthestream.com/2013-registration--fee.html>.

Michael Jabot, Ph.D.

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jabot@fredonia.edu

Door Prize Drawing

A good time was had by all!



*"I wonder if this comes in another color..."
Gilles Reimer adding to his wardrobe*



*"You're gonna win a door prize... and YOU'RE GONNA LIKE IT!" says STANYS' "late night host",
M.C. Fred Pidgeon*



Paul Nooney, head of STANYS' Door Prize Delivery Service, presents a lucky winner with his prize



Shelly Hinchcliff, DAL Chemistry, with her "art deco" poster sending a warm-and-fuzzy message to our M.C.s



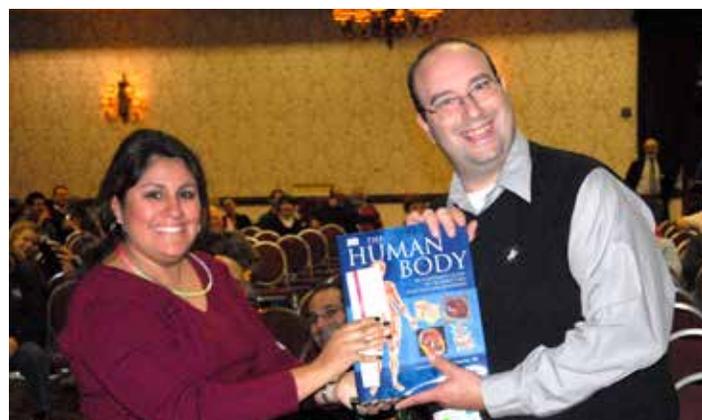
*Sometimes it's the delivery man that gets the prize!
Paul Nooney gets a surprise from a grateful winner*



*"and it's not even my birthday....!
- a happy winner with a winning smile.*



*".....or you can have what's behind Door #3..."
Paul again, delivering the goods to another winner*



*"The Human Body...I hope this isn't Rated X..." (What will my principal say???)
Paul Nooney and winner - we hope she is over 21...!*

Editor apologizes for picturing "mystery" winners...if you are in one of these photos, contact the editor with your name (and school, if you'd like). You'll appear again (with your photo) in the May/June issue!

Reports from STANYS Directors-at-Large

COLLEGES

Dr. Thomas O'Brien, DAL
tobrien@binghamton.edu
607-777-4877

By the time you are reading this newsletter, two potentially seismic events have occurred that hold great peril and promise for our missions as science teachers. First, the failure of many of our elected federal legislators to display the 21st century core competencies (i.e., creativity, critical thinking, communication, collaboration and computer/information literacy), will have resulted in the “mindless budgeting solution” called sequestration. Secondly, the Next Generation Science Standards (NGSS; see website below) will have been released to complement the Common Core State Standards in ELA and Mathematics. Local, NYS and national mass media venues will likely have begun to report on the negative impacts of sequestration on children, teachers and schools (at the same time our state teachers’ union is taking NYS to court over the tax cap law; see NYSUT United, March 2013: <http://www.nysut.org/nysutunited.htm>). It is regrettable, but likely, that the “good news” promise of the NGSS will go largely un-/under-reported and unrecognized and unused by many science teachers. Hopefully, these prognoses are both wrong.

But, if the underlying issues that led to sequestration are left unresolved, the resultant “bad news” impacts on education and other social services and safety nets cannot honestly be considered “unintended consequences” or even “unavoidable collateral damage.” Rather, these outcomes are better viewed as predictable, preventable, direct casualties in a cultural and political “war.” While the long-festering issues that led our nation’s “leaders” to this point of dysfunctionality are complex and both political “parties” share some portion of the blame, I’d like to use a biology activity/science education visual participatory analogy (O’Brien, 2011) to highlight the importance of a systems level approach to problem defining and solving that acknowledges: (1) current problems are often the result of past environmental conditions and “solutions” and (2) moving forward on complex problems often requires us to critically examine

unquestioned answers (i.e., environmental “givens”) as much as unanswered questions. All life and education are system-level, synergistic responses to opportunities and challenges that change over time. Therefore, individual adaptation and “species-level” evolution are essentials to short term viability and long-term sustainability.

Consider one of several species that is commonly known as the “resurrection plant.” *Selaginella lepydophyll* is a type of xerophytic plant that is available from local greenhouses and:

- Carolina Biological: (<https://www.carolina.com/> 800-334-5551): #157010 for \$6.25.
- Ward’s Natural Science: (<http://wardsci.com/> 800-962-2660): #86 V 5420 for \$7.20.

Depending on the number of plants purchased, the following science investigation can be done as either a Hands-On Exploration (with hand lenses and/or microscopes) or a teacher-led, discrepant event demonstration (using a document camera to display the plant at various levels of magnification). Ask the students to generate their own questions and/or consider such deceptively “simple” questions as: (1) How would you describe this object? (2) Is the brown, ball-shaped sample an inanimate nonliving thing, a living specimen, or a once-living, but now dead specimen? If it is living or once was living, to what kingdom is it likely to belong and why? (3) What observational empirical evidence (both macro- and microscopic) can we gather to support our inferences? What experimental variables could we manipulate to further test our inferences? (4) What environmental conditions are necessary (and perhaps missing here) for life to flourish? (5) What characteristics of living organisms are observable when they are placed in life-sustaining environments? (6) Why should life be considered a systems-level phenomenon in terms of both internal structures/form and functions/life processes and external environmental factors (e.g., the proverbial “fish out of water”)? (7) If this specimen can be demonstrated to be a still-living organism (by placing it in water and sunlight for several hours), what are the evolutionary advantages of this form of “plant hibernation or suspended animation”? What kind of environments do you think it “calls home”?

Education as with life itself, is a system level phenomenon. In what ways should dollars spent on high quality, “intelligent,” research-informed Curriculum-Instruction-Assessment systems be considered an investment in essential environmental conditions to support learning? What are the short- and long-term observable dividends that result from such investments? How long can students and schools survive, much less prosper, if these essential conditions are absent or suboptimal? Are all outcomes of publicly funded science education measurable? Does everything that can be counted, truly “count” when it comes to children’s learning? Are there things that truly count that cannot be counted (or measured)? In what ways can national, state and local reductions in funding for schools and potential delays in updating our mid-1990s era NYS Science Core Curriculum Guides and investing in NGSS-aligned professional development be considered the equivalent of withholding water, sunshine and essential nutrients from our students? Will the effects be as immediately noticeable as with resurrection plants? Will the recovery of students and schools be as easy as with the plants? What can we as science teachers do to “resurrect” support for public school science programs and our own students’ interest in and passion for learning science?

As a simple first step towards addressing some of these challenging questions, consider submitting an abstract for the annual STANYS Fall Convention and/or working with your science department colleagues to work out a way that at least one of you can attend this valuable professional development opportunity and bring “life-giving water” back to your school.

References Cited

- Next Generation Science Standards: <http://www.nextgenscience.org/>
- O’Brien, T. (2011). *Even More Brain-Powered Science Teaching and Learning with Discrepant Events*. Arlington, VA: NSTA Press. Activity 6: Resurrection Plant: Making Science Come Alive, (pp.81-97). This activity is developed as a much more complete 5E mini-unit than presented above. If you have not purchased the book, you can still access a collection of live, related web links cited in the Internet Connections feature free-of-charge at NSTA Press Extras: <http://www.nsta.org/publications/press/extras/evenmorebrainpoweredscience.aspx>

EARTH SCIENCE

Becky Remis, DAL

Report from the DAL/SAR Planning Meeting

The STANYS Earth Science Subject Area Representatives (SARs) met in early March to discuss and begin planning workshops for the annual statewide STANYS Conference in Rochester this November. In light of changes due to the new APPR process, the incorporation of Common Core ELA and Math Standards in curriculum and assessment, and the potential of NGSS adoption by NYS, workshops that focus on innovative instructional ideas are in the works.

The SARs will also host an Earth Science “demo derby” at the Conference to share their best practices with attendees. Materials and lessons related to SAR workshops will be available on the STANYS web site on the Earth Science Resource page for future reference, and as this page grows it will become a repository of some of the best work we do. There is also a “useful links” page that I encourage you to check out. The resources section of the STANYS web site is under construction, so please be patient. More is coming!

The STANYS SAR network includes a representative from each STANYS section for each curriculum area. However, there are vacancies for this position for Earth Science in the following sections: Northeastern, Northwestern, and Southwestern. PLEASE HELP TO FILL THESE VACANCIES! If you or someone you know is interested in becoming more actively involved in STANYS, please contact me at rremis@aol.com. This professional organization IS its members, and leaders are needed to keep it strong and moving forward in these times of change.

NGSS, the Future of Earth Science Education, and YOU

If NYS adopts the Next Generation Science Standards (final version out soon), will it change how we teach Earth Science in NYS? If you’ve reviewed the NGSS drafts, you know the answer is a resounding YES. And like me, you may be feeling both excited by and apprehensive of these new science standards. Here’s my perspective.

I’m excited that the NGSS weave Science and Engineering Practices and Crosscutting

Concepts within the Disciplinary Core Ideas of Earth and Space Science. This makes the incorporation of problem solving and argumentation, an understanding of nature of science and models, and the real-world application of Earth Science concepts the rule in our classrooms, rather than the exception. The Regents Earth Science curriculum is a mile wide, which means that it can be easy to focus our instruction on WHAT we know about Earth Science, and lose sight of HOW we know what we know... and most importantly WHY we care to know.

What makes me apprehensive of the NGSS is that these standards place much of our current Regents Earth Science content in the middle school grades. The purpose of this is noble. After all, if middle school students have a background in the “basics” (for example, weather and climate) then they can go on to learn about more complex concepts (like climate change and sustainability) in high school. But knowing the level of intellectual development of our middle and high school students (and the teenage brain’s ability to retain knowledge) makes me question this rationale.

If change IS coming, being prepared is the key. As a fellow STANYS member I feel safe in saying that I’m sure you’ve reviewed the NGSS drafts, joined NGSS discussion groups, and read articles to learn all you can (by the way, the National Earth Science Teacher’s Association has an excellent article on NGSS in the Spring 2013 issue of “The Earth Scientist”). Here are some other suggestions:

Continue your membership in STANYS, encourage others to join, and attend STANYS events especially the state Conference in Rochester in November. Being part of a professional network like STANYS is the best way to stay informed.

Seek out and share best practices with colleagues in your buildings, other districts, and across the state. Present a workshop at a local or statewide STANYS Conference, visit the STANYS web site and check out the new Earth Science Resource page (under development), and join the ESPRIT listserv to connect with colleagues across the state and country (<http://external.oneonta.edu/mentor/listserv.html>)

Join NESTA (the National Earth Science Teachers’ Association) to stay informed and to take advantage of resources specific to Earth and Space Science Education and NGSS (<http://www.nestanet.org>).

When a professional opportunity arises, take it. Become a teacher leader - in your department, building, district, or state-wide, even when it asks of your time and energy without pay.

While none of these actions affect NYS’s decision to adopt (or not adopt) NGSS, they will help you stay energized and engaged in the face of whatever changes do come along. We know the importance of Earth Science Education. We also know that other states look to New York as the gold standard for Earth Science Education. Stay informed, stay engaged, and encourage your colleagues to do the same.

National Hurricane Center webinars for 5th grade classes

The National Hurricane Center (NHC) and the Hurricanes: Science and Society (HSS) team continue to invite 5th grade classes to join them for a one-hour webinar during which students will hear from NHC scientists and forecasters, and NOAA Aircraft Operations Center (AOC) personnel that fly into hurricanes. Classroom questions will be collected in advance of the webinar, to be answered by the hurricane scientists. Introductory materials and helpful links will be supplied to all participating educators. Schools/classes wanting to participate MUST REGISTER in advance. Please visit the National Hurricane Center: 2013 5th Grade Webinars page in the Resources section of the Hurricanes: Science and Society website (www.hurricanescience.org) for more details and registration information.

Please note, registration will close one week in advance of each webinar. If you have any questions, please contact Holly Morin (holly_morin@mail.uri.edu).

Northeast Coast Webinars: Wednesday, May 8–10am ET; Thursday May 15–10am ET

*Northeast Coast states include: NJ, PA, NY, CT, RI, MA, VT, NH, & ME

Reports from STANYS Directors-at-Large

ELEMENTARY EDUCATION

Mary W Thomas, DAL

Elementary Subject Area Representatives meet in Binghamton

On Saturday, March 8th, the Elementary SARs from all across New York State met in Binghamton for our annual professional development day with all of the other SARs and Directors At Large (DALs). In attendance on this beautiful Saturday were representatives from seven of the STANYS Sections across the state: Kate Perry from Eastern Section, Helen Pashley from Westchester, Jeanann Klopchin from Southeastern. Nancy Coddington from Southern, Duane Willsey from Mohawk Valley, Garry Dole from South Western and Antonietta Quinn from Central Western Section.

The attendees heard about the upcoming Next Generation Science Standards (NGSS) from the point of view of the STANYS President, Brian Vorwald. In addition, we discussed a new initiative regarding the STANYS website and Innovative Ideas to be posted to share with the community of teachers.

Two professional development sessions followed the early morning meetings. Ideas were shared, interests were piqued, skills were developed. It was a fruitful meeting of the SARs and DALs once again.

The dedicated group of Subject Area Representatives and Directors at Large provide additional professional developmental

opportunities within the Sections and with teachers in their home districts. You can count on the SARs at the STANYS Conference to provide helpful, informative sessions that will be worth your time to attend!

We do have some Sections that need Elementary SARs. Please contact me if you are interested in joining us (especially if your Section doesn't currently have a SAR for Elementary.)
mthomas@monroe2boces.org

LIVING ENVIRONMENT

Lisa Brosnick, DAL

Inspiring students with Ecotourism

As teachers, we hear often about our need to inspire students. As of late, many of us inspire our students through a dynamic, minds - on classroom, problem based learning and of course by our passion for science. There is another way to light the fire of knowledge within young minds: marine biology field trips.

My district has a marine biology club that spends the year researching marine organisms and ecosystems. In the spring, the club members spend one week on location, living their research. This past week, thirteen club members and four advisors traveled to Anthony's Key Resort in Roatan, Honduras. Throughout this week, students learned about the features of the ecosystem through lectures and snorkel dives.

Before readers think, "I could never do that with my students," please read on! Our club has been in existence for 23 years and is run by Miss Julie

Palmer. The club spends the year fundraising through bottle and can drives, Mother's Day plant sales, fall bulb sales and wreath sales. Many students join the club as sophomores so that they can save enough money for the trip their senior year. Other students travel with the group more than one year.

Over the years, we have learned to stay away from

hotels and "tourist" traps. The club travels to research-based, educational locations. These include Roatan Institute for Marine Science (RIMS), Roatan, FORFAR Field Station, Andros Island, Bahamas, Marinelab, Key Largo.

Even though all of these locations have excellent marine science programs, the sites also offer a host of unique experiences. For example, during the trip to Key Largo, the club spends a day in the Everglades learning about the importance of these wetlands to the reef ecosystem. The trip to the Bahamas includes basket weaving lessons, trips to local towns to learn about the sponge industry and local history. The trip to RIMS includes a hydroponic garden tour.

Prior to departing for Roatan, students create a journal. The journal begins with labeled maps of the location to which they are traveling and information about the history and culture of the area. In the next chapter of the journal, students focus on the ecological importance of the area and representative organisms from the plant kingdom, invertebrates, fish and birds.

While on the trip, students add to their journals daily. They write about their experiences, keep a catalogue of species identified, and add art work and creative nature writing. The journal then becomes a record of their trip. More important than the journal are the lessons learned while on the trip. Students gain an appreciation for the fragility of the reef system and the interdependence of nature. Students begin to realize how their behavior at home can impact these fragile ecosystems. The cultural experience of another country is an added bonus of RIMS and Forfar.

Many teachers who hear about our trips are intrigued by the possibility of starting a marine biology club in their district. It is advisable for teachers to research locations before you take students there. If you are one who likes to visit a location before taking students, many facilities offer a trip leader experience. Tropical Marine Ecology is a teacher trip to a tropical location each summer and is a good way to have a similar experience in an adult setting. TME will be in Roatan in August this summer. More information is available at TME2013.blogspot.com.

Please check out our club blog to read about our students' experiences this past week. www.ncmbc2013.blogspot.com.



Four of the Elementary SARs at the end of a session about STEM: Science, Technology, Engineering and Math. Left to right: Nancy Coddington, Southern Section; Kate Perry, Eastern Section; Duane Willsey, Mohawk Valley Section; Helen Pashley, Westchester Section.



GROWNUP'S NIGHT AT THE MUSEUM

SPONSORED BY EASTERN SECTION OF THE SCIENCE TEACHERS ASSOCIATION OF NEW YORK STATE (STANYS) AND MUSEUM OF INNOVATION AND SCIENCE (miSci)

Where: miSci, 15 Nott Terrace Heights, Schenectady, New York 12308518-3827890

When: Friday, May 3rd

Time: 6:30-10:30 PM

Cost: \$30; STANYS members: \$25

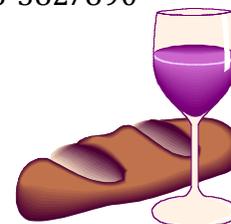
Attire: Evening casual

Tapas style food

Alcohol and non-alcoholic beverages

1st 100 STANYS members who register receive one complimentary drink

Professional Development certificates available upon request (4 contact hours)



The Eastern Section of STANYS and miSci are pleased to host a special evening for science teachers and other grownups interested in an exciting and stimulating evening of fun and games.

Munch on tapas style food, sip drinks while perusing miSci's new, rotating and permanent exhibits.

- *New:* IBM Think: This State of the Art exhibit is on a world tour with a stop at miSci. It has been at the Lincoln Center in NYC and Epcot Center at Disney World.
- *Rotating Exploratorium exhibits:* "Seeing is Believing" will be at the Museum until June when the Robotic dinosaurs move in for the summer. A new Exploratorium exhibit on motion will replace "Seeing is Believing" at that time.
- *Permanent exhibits:* See how technology has changed from the 19th-21st centuries. Charge up at the Van de Graaff generator and interact with many other exciting exhibits from Moon Rovers to MRI's.
- *Star Gazing:* Dudley Observatory Rising Stars will provide telescopes for night sky viewing
- *Planetarium shows:* 7:00, 8:00 and 9:00 PM
- *Scavenger Hunt* with prizes

Registration online or by mail

Go to: <http://stanysmuseumnight.eventbrite.com>

You will have a choice to download a registration form or to register online. A link to online registration is also provided on the downloaded registration form.

Lots of memories...

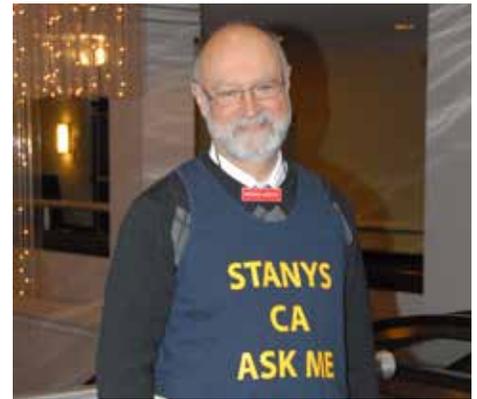
How sweet it was...!



Dr. Stephen Pruitt of Achieve explains the development of NGSS



Who could forget our fantastic Keynote speaker? Dr. Tyrone Hayes



Conference Assistant, Glenn Simpson, lookin' good in his "Official Uniform"



Fellows speaker Fabien Cousteau with Joan Wagner, Conference Speaker Coordinator



Registration's Mighty Crew. Thanks for a job well done!



Jason Horowitz, Chairperson Nassau Section, presented with Membership Award plaque by President-elect Fran Hess



Fish eye view of exhibit hall



Congratulations again to STANYS Fellows, Class of 2012: Barbara Poseluzny, Jutta Dudley, and Arnie Serotsky

Thoughts from our Past President

I have been thinking that these past four years have flown by. I remember being at my first exec meeting as the new Vice President of STANYS and being awed by the amount of discussion that went into these meetings. I kept it to myself but I was thinking, "Am I ready for this responsibility?"

I was assured that I would do fine if I just followed the example each past president set. I listened and asked questions and although it seemed like a daunting task to run STANYS, with the help of my fellow execs, the DALs and the SARs, the task was easily accomplished.

I also want to thank all my colleagues from around the state that also supported me as I made this journey from Vice President to President to Past President.

STANYS has allowed me to represent New York State science teachers around these United States and to extol the professionalism that our science teachers exude. I have presented at a couple of NSTA national conferences and the attendees always want to hear about New York's

regents exams and how our teachers prepare our students for them. I never fail to tell these people that New York science teachers are dedicated and are willing to help others with professional development or to eagerly garner educational knowledge for their own use. New York science teachers are consummate professionals who are willing to give of themselves to their colleagues and their students.

I thank all of you who put your trust in me and helped me guide STANYS. I will continue to be a part of this great science organization. STANYS has been a part of my teaching career since I first stepped into the classroom and I can only hope that today's younger and less experienced teachers receive the same support from their colleagues that I received from mine.

As this year winds down let us hope that New York makes the correct decisions about science education and allows us to continue to prepare the next generation of inquiry based learners.

Fred Pidgeon
Past President STANYS

NanoSpace

RPI Scientists Create Virtual Website to Increase Science Literacy in Children

NSTA has an exceptional reputation for providing teachers with information on the latest tools available to them to enhance and improve science literacy in their classrooms. A free virtual theme park, NanoSpace (<nanospace.molecularium.com/>), designed by renown scientists at the Rensselaer Polytechnic Institute (RPI) is part of RPI's ongoing initiative to provide accessible tools for teachers in classrooms world-wide. The site is ideal for use in classrooms for students in upper elementary and middle school, and is part of a the MoleculariumAE (<molecularium.com/> Project, RPI's broader effort to increase science literacy in children.

NSTA included NanoSpace (<nanospace.molecularium.com/>) in their Freebies for Teachers print column and website. Science teachers understand the importance of keeping children engaged in science and the important role it will play through their academic journey.

The leading scientists from Rensselaer Polytechnic Institute have just unveiled NanoSpace. This interactive, fun online environment is easily accessible for both the kids who play within it and the teachers who use the free educational curriculum in the classrooms.

More than 25 games and animations entice kids to learn more about atoms and molecules in NanoSpace. Visitors can try to beat the clock in Periodic Memory Game (<nanospace.molecularium.com/attractions/periodic_memory/>) and click-and-drag atoms to construct molecules in Build'em (<nanospace.molecularium.com/attractions/build_em/>).

Answer multiple-choice questions in Who wants to be a Quidecillionaire? (<nanospace.molecularium.com/attractions/quidecillionaire/>), and hope the answer is correct before you fall down to the bottom rung again. Five new animations feature the Molecularium computer Mel talking to his young friends about atoms and molecules, polymers, and even understanding DNA as "The Software of Life."

Check out this free tool for science teachers! Direct inquiries to

Patrice Harris 414.630.4438
patrice.harris.wi@gmail.com

Panama Canal Cruise & Panama: A Continent Divided; Oceans United

Join fellow STANYS members and their friends on a voyage of exploration and discovery! Cruise through one of the world's greatest engineering wonders: the Panama Canal. Stand on the deck of the M/S Discovery, your privately chartered 24-passenger ship, for a complete transit of the canal in daylight. Feel your ship lifted 85 feet above sea level to man-made Gatun Lake. Explore the diversity of species found in the Gamboa Rain Forest; take a zip-line ride and a forest canopy tour; visit the indigenous Embera Indians!

Depart with us July 19, 2014 for an 11-day adventure!

Reserve your place as soon as possible – you won't want to miss this!

- (1) Call Grand Circle Travel Reservations 800-597-2452
- (2) Mention "Service Code" G4- 23475 STANYS GROUP
- (3) Submit a deposit of \$500 per person, fully refundable for two weeks. Reserve early so you don't miss out.

Here is a link to this incredible tour : <http://www.gct.com/Trips/2014/Panama-Canal-Cruise-and-Panama-A-Continent-Divided-Oceans-United-2014.aspx>

Modeling Workshops

Fifty Modeling Workshops in high school physics, chemistry, physical science, and biology will be offered in summer 2013.

Modeling Instruction is designated by the U.S. Department of Education as an Exemplary K-12 science program.

For information:

<http://modelinginstruction.org/teachers/workshops-2013/>
<http://www.ptec.org/pd>

“Science Matters” to everyone!

Nancy V. Ridenour, STANYS Liaison to Science Matters

As many of you know, Science Matters is an electronic network that originated through a grant from NSTA to STANYS. We have been providing professional development and grant updates for over ten years. The purpose of the initiative was to reduce isolation for teachers and to provide them with timely information.

This electronic network is not the same as the Oneonta List serve, in that it is a one way means of communication. I post items that are sent to me for distribution.

This network can be very useful to STANYS Sections. Just send me information about workshops, meetings, etc. and I can direct that information just to your Section and not all over the state. I can send by Section and by demographics.

There are more than 6,000 schools in this state and we have 2059 Points of Contact. We would really like to have each school represented with a Point of Contact, so please consider signing up. It does not take a lot of time and the only expectation is for you to receive the e-mail announcements and to share them with your colleagues. The success of this network requires all buildings and all teachers to be represented.

The following directions will allow you to sign up.

1. Go to <http://bap.nsta.org>
2. On the left side of the opening page, click on “Become a Point of Contact”;
3. Step 1: Select State
4. From the menu, select “New York”;
5. Step 2: Enter only your school’s Zip in the first box (no other info in other boxes) & click “Find Schools”;
6. Step 3: Look just below “Find Schools” for the listing of all schools with that ZIP, & click on your school’s name. (If your school’s name does not appear, send a message to Nancy Ridenour (nridenour@twcny.rr.com) with the school’s official name, address, and ZIP. It will then be added to the list of schools with that ZIP);
7. Step 4: Complete template of first page about General Info. & Click “Next”;
8. Complete template on second page about Demographics. Under Demographics for Grades and for Subjects:
 - 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 representing, not just what you teach.
 - 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.
 - If you are representing just yourself, include just the grade(s) and subject(s) that you teach.
9. When completed, click on “Submit.”

Thanks for volunteering to be a PoC!

From Nancy Ridenour:

I developed the following for those of you who are retirees and hope that you will forward it to all others who are also retirees. This is a way to keep in touch with what is being posted.

“Science Matters” for Retirees

Several years ago, we established a “school” for retirees so retirees could continue to receive the messages from Science Matters. At that time, we could only have one PoC per school and Bob Dayton was the one designated. At present, we can have any number of PoC’s per school, so all retirees can join the DAL Academy-Retirees.

Below are directions on how to do it. Please distribute this information to all the retirees you know.

Go to <http://bap.nsta.org>

1. On the left side of the opening page, click on “Become a Point of Contact”;
2. Step 1: Select State
3. From the menu, select “New York”;
4. Step 2: Enter: DAL Academy – Retirees . . . for the school
5. Step 3: Complete template of first page about General Info. & click “Next”;
6. Step 4: Complete template on second page about Demographics. Under Demographics for Grades and for Subjects: Include whatever demographic information you would like to receive
7. When completed, click on “Submit”.

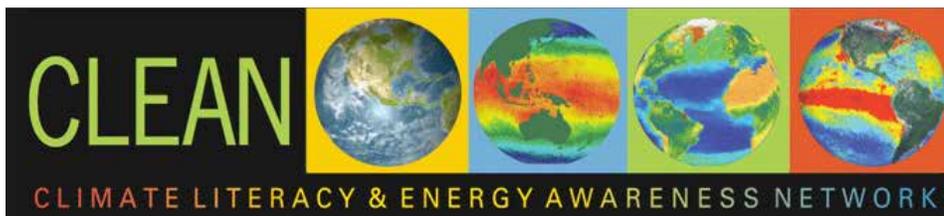
If you have any questions, contact me. Nancy Ridenour (nridenour@twcny.rr.com).



ERRATA

Our apologies!

In the January/February issue of the STANYS Newsletter this photo was mis-identified. These fine gentlemen, Mike DuPre (left) and Vince Stornello, represent the Central Western Section, *not* the Finger Lakes Section.



Free Digital Teaching Resources on Climate and Energy

This digital collection of 500+ vetted teaching materials for grades 6 - 16 includes activities, visualizations, and videos on climate science, climate change, and energy concepts. These free resources are appropriate for courses in biology, chemistry, physics, environmental science or engineering, geology, and geography. Only materials accepted by our review panels of scientists and educators are included. Search the collection by topic, resource type, or grade level. Learn about how to teach concepts in climate and energy using literacy principles. This amazing resource was created with NSF funding. <http://cleanet.org/index.html>

Digital Climate and Energy Teaching Resources for Grades 6 - 16 (Free)

This NSF-funded collection of 500 vetted, digital materials on climate and energy concepts includes: learning activities, visualizations, animations, and video.

These materials are suitable for biology, chemistry, Earth science, environmental science, physics, math, and engineering courses. Only those materials accepted by our review panels of scientists and educators are posted. Search the resources by topic, resource type, or grade level. Learn about how to teach climate and energy concepts and literacy principles.

Share this resource with your colleagues and students! cleanet.org

Share My Lesson

Everywhere I go, teachers, classroom paraprofessionals and other educators are telling me how helpful Share My Lesson [<https://account.sharemylesson.com/Register>] is and how it's helping them and their students find the resources they need.

And it's no wonder:

- Already, close to 200,000 U.S. educators have subscribed to the site, making it the fastest-growing online learning community for those working with students.
- More than 260,000 K-12 classroom resources have been uploaded to the site, tagged by content area and grade level for easy searching.
- A growing Common Core State Standards Information Center points teachers to useful resources that model approaches for teaching to the new standards.
- More than 1.5 million resources have been downloaded, the average user taking 10 on each visit.

I want to personally invite you to sign up for Share My Lesson <<https://account.sharemylesson.com/Register>> and take advantage of this incredible resource. The site's basic content is free, and always will be, and you can be 100 percent certain that your e-mail address and personal information is safe and will never be sold. Once you sign up, within minutes you'll receive an activation e-mail. Follow the instructions in that e-mail, and you're all set. Hundreds of thousands of resources developed by colleagues will now be at your fingertips.

Hundreds of teachers have had a hand in developing Share My Lesson, and we look forward to your participation as well. Please sign up and share this message with a friend.

In solidarity, Randi Weingarten AFT President

2013 Summer Science Explorations at The Portal to Discovery™

(a partnership between the Long Island Matrix of Science and Technology and the Office of Educational Programs at Brookhaven National Laboratory)

TEACHER PROFESSIONAL DEVELOPMENT PROGRAMS

Teachers are invited to participate in professional development workshops listed below or they may choose from one of our student programs to gain content knowledge while observing students engaged in a variety of STEM-based hands-on activities.

Molecular Ecology and Evolution of the Southern Flying Squirrel

This course will provide hands-on STEM training in both the field and laboratory and act as a mechanism to develop a course lesson based on the Common Core.

DATE: June 24-27
 TIME: varies due to field work, generally 9 a.m.-4 p.m.
 COST: \$300
 LOCATION: Sayville HS

SOAR: Aeronautical Engineering for K-6: Alignment to the Common Core

Participants will be introduced to elementary physics related to flight, propelled and un-propelled. All participants will receive a complete set of workshop materials including PowerPoint presentations and design templates.

DATE: July 29-August 2
 TIME: 9-3 p.m.
 COST: \$250
 LOCATION: Brookhaven National Laboratory

To register or for more information, visit our website: <http://www.bnl.gov/education/static/sse/teacher.asp> Contact person is:

Bernadette Uzzi
 631-344-2756
buzzi@bnl.gov

Executive Committee

JULY 2012 – JUNE 2013

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Conference 2013

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**IF YOU MOVE, PLEASE
 NOTIFY STANYS OF YOUR
 CHANGE OF ADDRESS**

Find yourself in STANYS!

The list below shows the counties represented by each STANYS Section. When you join STANYS, you can choose to be a member of any of the Sections. Perhaps you'd like to be a part of the Section in which you work... or, if you live close to a "county line", you might find it "geographically desirable" to become a part of the Section next door. Or you might just want to join the Section in which many of your colleagues are actively involved. Whatever your choice, your Section will be the springboard to workshop offerings and leadership opportunities locally and statewide.

JOIN STANYS NOW – and "have it your way"!

STANYS SECTIONS

New York City (NYC) - Brooklyn, Manhattan, Queens, Staten Island

Catskill-Leatherstocking (CL) - Chenango, Delaware, Otsego

Central (CE) - Cayuga, Onondaga, Oswego

Central Western (CW) - Livingston, Monroe, Ontario, Seneca, Wayne, Yates

Eastern (EA) - Albany, Columbia, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

Mohawk Valley (MV) - Herkimer, Madison, Oneida

Nassau (NA) - Nassau

North Central (NC) - Jefferson, Lewis, St. Lawrence

Northeastern (NE) - Clinton, Essex, Franklin

Northwestern (NW) - Genesee, Niagara, Orleans

Southeastern (SE) - Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster

Southern (SO) - Broome, Chemung, Cortland, Schuyler, Steuben, Tioga, Tompkins

Southwestern (SW) - Allegany, Cattaraugus, Chautauqua

Suffolk (SU) - Suffolk

Westchester (WE) - Bronx, Westchester

Western (WR) - Erie, Wyoming

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 _____

Secondary 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="checkbox"/> \$44.00	<input type="checkbox"/> \$82.00
Intermediate/Jr. HS	<input type="checkbox"/> \$44.00	<input type="checkbox"/> \$82.00
High School	<input type="checkbox"/> \$44.00	<input type="checkbox"/> \$82.00
College	<input type="checkbox"/> \$44.00	<input type="checkbox"/> \$82.00
Associate	<input type="checkbox"/> \$44.00	<input type="checkbox"/> \$82.00
Retired	<input type="checkbox"/> \$23.00	<input type="checkbox"/> \$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 DOES NOT ACCEPT PURCHASE ORDERS.

** Enclosed is my tax deductible contribution of \$ _____ to: STANYS Foundation Fellows Conference Award Fund

STANYS: PO Box 2121, Liverpool, NY 13089-2121

Phone: (516) 783-5432

Email: info@stanys.org

PAYMENT OPTIONS

CHECK – Payable to STANYS

Visa MasterCard

Print Cardholder's Name _____

Card Number _____

Exp. Date _____

CVV2 Code _____

Membership \$ _____

Contribution** \$ _____

Total \$ _____

Cardholder's Signature _____