



Eastern Section of STANYS

Newsletter
Summer 2017

Albany, Columbia, Fulton, Greene, Hamilton, Montgomery,
Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

Hello Eastern STANYS Members!

Thank you all for a fantastic 2016-2017 school year. Your enthusiasm for science, learning, and educating helps to make my role as Eastern Section Chair easier. Our Board of Directors have been actively preparing and planning professional development, workshops, and events to continue the excitement! The new Science Learning Standards for NYS are in the implementation phase- now is the time to reach out to SED, contact Ann Crotty ann.crotty@nysed.gov at NYSED if you have any input. All emails will be read and considered! Share your opinions for curriculum guides, assessment formats, and support materials. The focus of the Siena Conference in October and the State Rochester Conference, November 4th -6th, will highlight and help to connect the new standards to current practice.

One way STANYS has continued to evolve includes adding a Director at Large (DAL) at the state level and a Science Area Representative (SAR) at the section level for Special Education/ English Language Learning. Our section currently has this space vacant on our board. We are looking to recruit a teacher with expertise in these areas. If you know, or are, someone who could help connect science and special education practices, please join us! Contact Katy Perry at easterndirector@stanys.org and let me know. Thanks!

Our Spring Pub Science events, masterfully coordinated by Leigh Feguer and Josh Conway, have been great fun and educational events. They are looking to expand offerings to include summer field trips. Stay tuned! Josh Conway has also taken over the role of Webmaster for the Eastern Section. Thanks, Josh! Keep an eye out for our new site layout.

I would like to send out accolades to Rebecca Remis, our out-going Earth Science DAL current Eastern Section Membership coordinator, and Schalmont HS teacher. She has been selected as the Outstanding Earth Science Teacher Award for NYS by the Nat. Association of Geosciences. What an honor!

As the school year wraps up, please share this newsletter, mark your calendars for Siena and Rochester, and enjoy the summer break! We look forward to seeing you all at conferences, workshops, and pub science events.

Best Regards,

Katy Perry,

Eastern Section Chairperson
easterndirector@stanys.org

Eastern Section Newsletter Summer 2017



New Design to Our Website

Joshua Conway
conwayj@troycsd.org

We are excited to announce that our new website is under construction! When finished, the new site will allow us to keep members updated on the latest news and events in the area and around the state.

We hope that it will be your “go to” source for information on science teaching. Be on the lookout for requests from the Eastern Section on ways you can help us grow our website and our membership.

If you have any questions or suggestions for the new website, please direct them to Joshua Conway at conwayj@troycsd.org



join us on
facebook



October 13, 2017
STANYS -Eastern
Section
Conference at
Siena College

Elementary News

Katy Perry
Eastern Section STANYS Elementary SAR
easterndirector@stanys.org

What a phenomenal spring! Phenomenon based learning has captured the excitement of my students. After exploring how materials interact with a pH probe, my science class created an experiment testing soil pH as they dug downwards. The group collected acidity data and was also enthralled by the changes in soil color. They questioned the reasons why and crafted a second research project, all based on their initial experiences with pH indicators. I know if I had asked them to research soil horizons, there would have been grumbles and groans aplenty! Incorporating authentic phenomena into daily science lessons has been a successful tool in my classroom, and I hope you've tried it in your classes too! Phenomenon based learning is a hot topic for STANYS PD, along with connections to the new NYSSLS that are on their way to you soon. This year, at the state STANYS conference in Rochester, Sunday morning there will be an Elementary Institute section. Registering for the Institute will give you the option to choose from 3 workshops focusing on adaptations, light waves, and chemistry. Each academic area is restructuring how the workshops are offered, but the networking, resource sharing, and great times will continue!

There are many great summer workshop and professional development choices around, but the best may continue to be the type that reconnect us to science! Citizen science projects, exploring a museum or nature center, and tinkering in the garage can prepare us to teach the investigative skills to our students. Then, share what you are learning to other teachers! Please consider presenting at our Eastern Section Siena Conference! Also reach out to other elementary teachers in your building and connect with middle and high school science teachers to support quality science education and resource sharing.

Have a joyous summer!



Membership Made Easy

Becky Remis,
Membership Chair
beckyremis@gmail.com

Membership

As the school year winds down I am reminded of that scene in "Finding Nemo" when the tuna get trapped in the net and Nemo yells to them (and Dory) to all swim together to save themselves. What if everyone involved in science education in New York State swam in the same direction, at the same time, towards the same goal? We could accomplish anything together with a shared vision, and a plan of action. As it turns out, we have such a vision and a plan in the New York State Science Learning Standards set for implementation on July 1. Will you and your colleagues be ready?

When big changes happen, the best way to prepare is to first be informed. And your membership in STANYS helps you do just that. Membership is now easier than ever, with joint memberships with NSTA and group memberships - both at a discount to you. As a current member receiving this newsletter, you understand the value of STANYS membership. And as a member you are the best person to encourage - no, to insist - that your colleagues also become members. Send them to this link for information about joining, or rejoining, STANYS: <http://www.stanys.org/about/member-benefits.html>

STANYS is only as strong as its members, and so I encourage you to continue your membership and to recruit others to join. Please contact me anytime with any questions about membership in STANYS.



Student looking through telescope with solar filter in visible spectrum to view sunspots



High School Earth Science students safely looking at the Sun

The Great American Eclipse

Becky Remis, DAL - Earth Science

It seems fitting that the topic of my last Eastern Section newsletter article as DAL be about one of the rarest astronomical events to affect North America - a total solar eclipse! Yep, on August 21st the path of totality will pass across our continent, and here in the northeast a partial eclipse will be visible.

Go to this link for lots of information and details:
<https://www.greatamericaneclipse.com/>

Astronomers from the Dudley Observatory in Schenectady housed at the Museum of Innovation and Science (<http://www.misci.org/>) came to the Schalmont School District campus recently. With 800 solar viewing glasses in hand and two solar viewing telescopes, they trained our Middle School and High School students about the eclipse and how to safely view it this summer.

Needless to say, this was a welcome distraction for our students and staff and an excellent way to make science come alive. Check out the photos of this event, and get out there and watch the event of a lifetime this summer!



Science Teacher James Sommer and Dudley Astronomer Dr. Valerie Rapson



Visiting astronomers address a group of middle school students

Just the Facts of

Arden R. Rauch
rauch@union.edu



Science is being battered partly because of us! By dwelling on the FACTS, the theories, even cause and effect relationships, the essence of science, **PROCESS**, is occluded if not ignored.

To doubt, to question, to conclude based on current interpretations of data is an achievement, not a detriment. To reassess data, to critically examine conclusions, to reinterpret, to continue to explore, accumulate data and, above all, to publish for others to evaluate, is science.

How to convey that to students is no easy matter, especially since they are so conditioned to a sound bite, YES or NO answers. Nuance and consideration of variables must be part of the critical thinking. A recent statement from Council for Aid to Education, based on data, indicates that the ability to “distinguish the validity of evidence and its purpose” or “determine the truth and validity of an argument,” is a common deficiency. (<http://www.msn.com/en-us/money/careersandeducation/exclusive-test-data-many-colleges-fail-to-improve-critical-thinking-skills/ar-BBC6nBr>).

I still remember a headline in a local paper: WHITE BREAD CAUSES CANCER. How many in the study: 14! A perfect opportunity to launch a lesson on critical thinking. It has never been difficult to find current topics, perhaps more so now than ever.

In the classroom, activities can be structured to emphasize process: For example, though simplistic, germinate seeds under variable conditions. What conditions germinate the most seeds. Develop tentative conclusions based on data and then question those conclusions and devise procedures to substantiate, validate, negate or even to lead to an inconclusive conclusion. Without the infusion of process, the understanding of science based information will continue to diminish.



To all participants and winners of the
Greater Capital Region Science and
Engineering Fair.

A list of winners can be viewed on the
next pages.

Junior Division Grand Prizes

1st Place: Dennis Plotnikov, Van Antwerp MS

2nd Place: Atharv Agashe, Shaker Jr. HS

3rd Place: Alyssa Spiezio & Nina Sgambelluri, Greenwich CSD



Greater Capital Region Science and Engineering Fair

Joan Wagner, Director
www.gcrsef.org

The greater Capital Region Science and Engineering Fair took place on March 18, 2017 at RPI. Approximately 167 students participated from 26 schools.

This fair is a regional fair for the Intel International Science and Engineering Fair and the STANYS State Science Congress.

The Grand Prize winners in the junior division were as follows:

First Place: Dennis Plotnikov, Van Antwerp Middle School: "Underwater Communication Using Magnetic Waves"

Second Place: Atharv Agashe, Shaker Jr. HS: "How Does Martian Soil Affect Plants?"

Third Place: Alyssa Spiezio & Nina Sgambelluri, Greenwich CSD: "From Water to Sparks - Does a Greater Amount of Water Affect the Sparks per Minute?"

First Honorable Mention: Ramona Jordan, Greenwich CSD, "Can We Stop the Snot?"

Second Honorable Mention: Lauren Chuhta & Peter Stone, Greenwich CSD: "Roof Top Gardens: Are they a Cool Idea?"

Third Honorable Mention: Rohan Menon, Iroquois Middle School: "A System of Air Vents that Save Energy"

Junior Division Grand Prizes

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2nd Place: Atharv Agashe, Shaker Jr. HS

3rd Place: Alyssa Spiezio & Nina Sgambelluri, Greenwich CSD



All Grand Prize winners are invited to participate in the National Broadcom Masters Competition. Finalists are invited to Washington, DC in the fall to compete in over \$40,000 of awards. The top three awardees go on to compete in the STANYS State Science Congress to be held at the University of Buffalo, June 3rd.

In addition to the Grand Prize Awards, many special awards are given out to participants sponsored by local organizations and businesses and through Affiliation with Intel ISEF.

American Society for Microbiology: Charlie Gartner, Greenwich CS

Dudley Observatory: Laura Romania, Greenwich CS

Cullen Blake/Deen Mousa Excellence Award: David Gabriel, Greenwich CS

Momentive Performance Material: Tess Merrill, Greenwich CS

NABT: Molly Morse-Belcher and Hunter Dixon, Greenwich CS

National Grid: Sophia Traver, Greenwich CS

Nuclear Society: Laura Romania, Greenwich CS

Price Chopper Golub Foundation: Aarohi Vaavad, Shaker Jr. HS

Regeneron Pharmaceuticals: Rachel Mueller, Greenwich CS

SI Group Smart Chemistry Award: Emma Loffredo, Shaker Jr. HS

STANYS Eleanor Miller-Reed Science Research Award: Ellery May & Reagan Bittel, Greenwich CS

American Meteorological Society: Shashank Garg, Shaker Jr. HS

Association of Women Geoscientists: Ashley Cheffolway, Shaker Jr. HS

US Air Force Reserve: Rohan Menon, Iroquois MS

US Metric: Dolly Bhashyam, Shaker Jr. HS

US Navy and Marine Corps: Peter Stone & Lauren Chuhta, William Hamilton, Greenwich CS

Senior Division Honorable Mention

1st Honorable: Gaurab Banerjee, Shaker HS

2nd Honorable: Christopher Maloney and Anam Metha, Shaker HS

3rd Honorable: Jonathan Sinopoli, BH-BL HS



The top three grand prize winners will be competing in the Intel International Science and Engineering Fair May 14-19th in LA, CA.

The Honorable Mentions will be participating in the STANYS State Science Congress, June 3rd at the University of Buffalo.

The Grand Prize winners in the senior division are:

First Place: Conor Collins, Monroe-Woodbury HS: "The Development of a Novel Two-Stage Hollow Fiber Filter to /reduce Pain on Injection of a Propofol Emulsion.

Second Place: Ved Kumar, Guilderland High School: "Vision Based Robot Intelligence."

Third Place: Samantha Boyea, Greenwich CHS: "The Development of an Unmanned Aerial Vehicle for Use in Silo Inspection."

First Honorable Mention: Guarab Banerjee, Shaker HS: "Reconsidering the Geometry of the Liver Lobule"

Second Honorable Mention: Christipher Maloney and Anam Metha, Shaker HS: "Novel Paper and Pencil Supercapacitor"

Third Honorable Mention: Jonathan Sinopoli, BH-BL HS: "Immediate and Transient Alteration in Brain Function Induced by Firearm Recoil."

Grand Prize Senior Division
Conor Collins, Monroe-Woodbury HS
Ved Kumar, Guilderland HS
Samantha Boyea, Greenwich CHS



The following Special Awards were given out in the senior division:

Albany College of Pharmacy and Health Sciences (two \$20,000 scholarships): Therese Biazon, Shaker HS; Mary Hamila, BH-BL HS

Albany Molecular award: Karolyn Bedore, BH-BL HS
American Society for Microbiology (ASM): Tara Abularrage, Rondout Valley HS
Brown League Sports Award: Eva Scott, BH-BL HS & Evan Karl, BH-BL HS
Dudley Observatory: Rebecca Hyatt, Shaker HS
Linda Austin DNA Science and Technology Award: Clarissa Marwali, Shaker HS
Momentive Performance Materials Award: Cecelia Lu & Jonathan Choi, Shaker HS
NABT: Eric Jess, Saratoga HS
Nuclear Society: John Lehner, Saratoga HS
National Grid: Christipher Maloney &v Anam Metha, Shaker HS
Price Chopper Golub Foundation: Aryia Dattamajumdar, Niskayuna HS
Regeneron Pharmaceuticals Award: Jaskiran Dhinsa, Bethlehem CHS
RPI \$40,000 Scholarship: Samantha Boyea, Greenwich CHS
SI Group Smart Chemistry Award: Snehita Sana, Shaker HS
STANYS Eleanor Miller Reed Research Excellence Award: Jessica Palmeri, Rondout Valley HS
Walter Eppenstein Physics and Astronomy Award: Caleb Heuvel-Horwitz, Rondout Valley HS
American Psychological Association: Megan Fey, Columbia HS
ASM International Foundation Outstanding Materials Award: Unnas Hussain, Shaker HS
ASU Walton Sustainability Solutions Initiatives: Asma Bawla, Shaker HS
Intel Excellence in Computer Science: Evan Karl, BH-BL HS
Mu Alpha Theta: Arpeet Patel, Monroe-Woodbury HS
NASA Earth Systems Science Award: Cecelia Lu & Jonathan Choi, Shaker HS
NOAA: Robert Colbath, Monroe-Woodbury HS
Regional Ricoh Sustainable Development Award: Benjamin Goldsmith, Nyack HS
Society for In Vitro Biology: Karolyn Bedore, BH-BL HS
Stockholm Junior Water Prize: Morgan LaMere, BH-BL HS and Robert Colbath, Monroe-Woodbury HS
US Metric: Jonathan Sinopoli, BH-BL HS
US Air Force: Snetha Sana, Shaker HS; Anard Gandhi, Shaker HS
US Navy and Marine Corps: Colin Gordon, Monroe-Woodbury HS; Christopher Barra, Shaker HS, Varun Mondaiyka, Shaker HS
Yale Science and Engineering Association Inc.: Samantha Boyea, BH-BL HS



If you have some great lessons you would like to share with us, or would like to present a topic to fellow educators why not become a presenter? If interested, please complete this form and submit it to Tom Shiland. You will also be able to download this form on our website.



**35th Annual STANYS Siena Conference
Presenter Proposal Form**

October 13, 2017

Name (including title): _____

Additional presenters with school/business/ organization affiliation:

Your school/business/organization affiliation: _____

Preferred Mailing Address: _____

Phone numbers: home _____ office _____ cell _____

Preferred email: _____

Title of Presentation: _____

Description of Presentation (25-word maximum please): _____

Preferred Session: Session I, 4:30-5:20pm _____ Session II, 5:40-6:30pm _____

*Preference cannot be guaranteed. Sessions are assigned based on need & room availability

Room needs (circle all that apply): PC MAC projection with screen lab tables sinks
other: _____

I will bring my own:

- ☐ computer
- ☐ projection equipment

Please return by July 15, 2017 to:

Tom Shiland
30 Fairway Boulevard
Gansevoort, NY 12831

I will contact you by September 7, 2017 with a room number.

For questions, email Tom at tomshiland@gmail.com

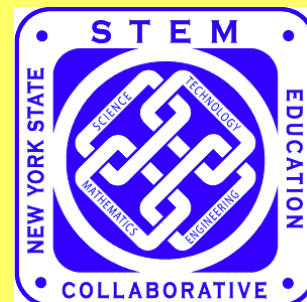
The New York State STEM collaborative will sponsor a summer institute this summer July 31 thru Aug 2 at Alfred State University. The price for registration and lodging which includes meals will be @ \$200 per person. This conference has in the past had many sessions all with at least 2 of the STEM components in them. Most are hands on and very well presented. There are also vendors. You may go to the STEM website to gather info and exact methods of payment as well as presentations. Here is the link to the STEM page: <http://www.nysstemeducation.org>

Here is the agenda of the conference:

2017 STEM Collaborative Summer Institute Schedule

Sunday, July 30, 2017:

Noon	Vendor Area Opened for Vendors
3:00 PM- 5:00 PM	Registration/ Check-in
5:00 PM- 6:00 PM	Poster Session 1 (Cocktails)
6:00 PM- 7:00 PM	Dinner
7:00 PM- 9:00 PM	Trivia, or other

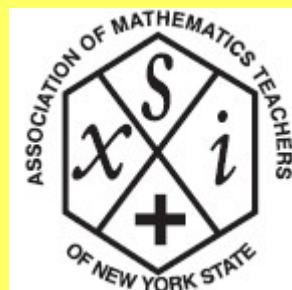


Monday, July 31, 2017:

6:30 AM- 7:45 AM	Breakfast
7:00 AM- 9:00 AM	Registration/ Check in
8:00 AM- 9:00 AM	Plenary Panel
9:00 AM- 9:30 AM	Vendors and Break
9:30 AM- 10:30 AM	Session #1 Presentations
10:30 AM- 11:00 AM	Vendors and Break
11:00 AM- 12:00	



Noon	Welcome and Keynote Address
1:00 PM- 2:00 PM	Session #2 Presentations
2:00 PM- 2:30 PM	Vendors and Break
2:30 PM- 3:00 PM	Session #3 Presentations
3:30 PM- 4:00 PM	Vendors and Break
4:00 PM- 5:00 PM	Session #4 Presentations
5:00 PM- 5:30 PM	Vendors and Break
5:30 PM- 6:30 PM	Poster Session 2
6:30 PM- 7:30 PM	Dinner
7:30 PM- 8:30 PM	Keynote and Awards



Tuesday, August 1, 2017:

6:30 AM- 7:45 AM	Breakfast
7:00 AM- 9:00 AM	Registration/ Check in
8:00 AM- 9:00 AM	Session #5 Presentations
9:00 AM- 9:30 AM	Break
9:30 AM- 10:30 AM	Session #6 Presentations
10:30 AM- 11:00 AM	Break
11:00 AM- 12:00	
Noon	Welcome and Keynote Address
1:00 PM- 2:00 PM	Session #7 Presentations
2:00 PM- 2:30 PM	Break
2:30 PM- 3:00 PM	Session #8 Presentations
3:30 PM- 4:00 PM	Townhouse Checkout

Professional Development for Each Day

Sunday	3
Monday	7
Tuesday	5
Total	15

Submitted by Fred Pidgeon

STANYS rep to The NYS STEM Collaborative

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