

Fall 2016 Newsletter

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

Message from the Section Chair

Katy Perry,
Eastern Section Chair
easterndirector@stanys.org.

Welcome back to the school year!

I know, as educators, we constantly challenge ourselves present engaging science lessons, develop meaningful curriculum and innovate. To help you do this, the Eastern Section STANYS has slated an exciting fall. We have Pub Science events, the Siena Conference, and continuing connections to new science learning standards support. We are here to provide professional development, academic and social networks, and inspiration! These are increasingly important as changes come from NYSED. The Eastern Section covers the 11 counties in and around the Capital District and is filled with experienced educators are working to help you do your best. Our Section publishes several newsletters throughout the year and offer at least monthly professional development activities. Member contributions are essential! If you are interested in contributing to the newsletters, volunteering at conferences, participating at the local or state level boards, or have professional development requests and ideas, please let us know.

A few briefs:

The new science standards are still in progress; we will keep you updated!

There is a state wide change with how continuing education and professional development credits are being tracked and offered. We will be adapting our documentation methods accordingly.

Important Dates:

Registration links are on our website <http://www.eastern-stanys.org/>

- 🌟 Pub Science at Brown's Brewing in Troy, Wednesday, Sept. 28, 6-8pm Caves and Karst of the Helderberg Region, presented by Mike Nardacci
- 🌟 Siena Conference - Siena College Loudonville, October 14
- 🌟 State STANYS conference in Rochester is November 4th – 7th

Have a great fall!
Sincerely,
Katy Perry

JOIN US

We are hosting our
35th Annual
Eastern Section STANYS
Fall Conference
At Siena College on October 14th, 2016



Hello Middle and High School Science Colleagues

Bill Brown
Vice Chair, Eastern Section
wbrown@queensburyschool.org

The drafted NYSSLS science standards create an opportunity for high school and middle school science teachers to get more involved with science implementation in our elementary schools. My charge to all of you is this:

1. Learn as much as you can about the drafted NYSSLS standards and the 3D ideals for students “doing science” instead of just “learning science concepts”.
2. Reach out to your elementary administrators and teachers regarding these changes. The standards most likely will reduce the amount of science content that is taught at the elementary level so that the students can have more time for the exploration of science and to be the “Little Einsteins” that they already are. This shift or pivot from the current methods of teaching elementary science should help these students to become better problem solvers, better mathematicians, better writers, and better readers.
3. If there is content that would be new to a grade level at your district (based on the drafted NYSSLS), use this as an opportunity to create teacher-to-teacher professional development at your district. When middle and high school science teachers teach elementary teachers the new content it should allow for more collaboration going into the future.
4. Help your district investigate programs like the Project Lead the Way (PLTW) Launch program for students K-5. Each unit in this program uses the 3D approach to learning science, is organized with step by step lesson plans, and is aligned with the methods and curriculum in the drafted NYSSLS. This could be a great first step for elementary teachers to try this shift in science teaching methods.

Look at these drafted NYSSLS standards as a great opportunity to positively affect how science is taught at the elementary level in your district.



Living Environment

Kelly Ryan SAR Eastern Section

kellyryan@ncolonie.org

This summer I had the opportunity to speak with a former college professor of mine that I hadn't seen since I graduated from the University of Buffalo 31 (gulp) years ago. Professor Clyde Herreid taught Evolutionary Biology, the intro course for Biology majors, and he fostered in me a love of Biology that I carry to this day. A few weeks ago, he was leading a workshop at UAlbany on teaching science using case studies, a method I have used in my own classroom after being inspired once again by Dr. Herreid and the National Center for Case Study Teaching that he founded. During one of the breaks, I introduced myself and was able to thank him for being such a positive role model and influence on the biology educator I have become. I will keep this encounter in mind as I begin my 29th year in the classroom and continually strive to instill a love of biology in the next generation! To keep things fresh for my students I am constantly trying new methods, new lab activities and new technologies. For me, participating in workshops and conferences is what rejuvenates me and gets my creative juices flowing. Our annual Eastern Section Conference at Siena College has several sessions that will compliment the Living Environment curriculum- so be sure to join us! In my session, "Breast Cancer Risk: Genes and the Environment", you'll have the opportunity to use a kit from Science Take-out and see how I modified and incorporated it into the LE curriculum. I will also demonstrate how I've modified and utilized other Science Take-out kits dealing with scientific method, homeostasis, and more. Science Take-out kits always deal with real world applications and typically include some sort of simulation and/or data collection or analysis. Dina Markowitz Ph.D., from the University of Rochester's Life Sciences Learning Center, develops the kits. They are engaging, well done and very inexpensive to purchase or put together. I am excited to share these wonderful resources with you! Good Luck as you begin the 2016-2017 school year and I hope to see you at Siena on Friday, October 14th!

Professional Development Changes:

Teachers professionally certified (not permanently certified) now need 100 CTLE hours in five years from approved CTLE sponsors.

State STANYS has gotten approval to be a CTLE Sponsor, so many of our workshops at the Rochester conference will carry the CTLE approval. STANYS will maintain attendance records for the participants that complete each CTLE approved workshop and give certificates for each workshop they complete. The CTLE sponsors and teachers are now responsible for records, not the districts.

STANYS Sections are in the process of gaining CTLE Sponsor approval.

Keynote Speaker at the 34th Annual Siena Conference Dr. Tom Werner



The 35th Annual Siena Conference will take place on Friday, October 14th. Our keynote speaker is Dr. Tom Werner who is currently the Florence B. Sherwood Professor of Physical Sciences Emeritus, Union College. His presentation is entitled Science in a Social Context: The Detection of Performance Enhancing Drugs (PEDs) in Sports. The presentation will feature the "cat and mouse" games involved in PED detection in sports, including relevant examples for the classroom.

In addition, we have 21 workshops for you to choose from with a balance between all the disciplines. Attached is the program and registration form. Please "go green" and use the electronic registration at EventBrite. See you there!

Mark your Calendar!

3 Ways to Stay Current in the Currents of Science Information

Arden R. Rauch
raucha@union.edu

1. Local Earth Science opportunities and succinct references to current ES events:

If you are already receiving updates from me, you don't need to do anything.

If you want to join (FREE) ESnet, and well over 100 are or want to be deleted, email me at raucha@union.edu.

2. Local Environmental Science opportunities and succinct references to current Environmental events:

If you are already receiving updates from me, you don't need to do anything.

If you want to join (FREE) EnvNet, and well over 50 are or want to be deleted, email me at raucha@union.edu.

3. Join Science Matters:

National Science Teachers Association (NSTA) sponsors a free distribution list which is designed to have one person in each school receive email and then send it on to appropriate colleagues. To learn more, go to:

<http://bap.nsta.org/Content/Home/FAQ.aspx> If you chose to become a PoC, which requires just a few minutes per week, go to: <http://bap.nsta.org/Content/Home/BecomeAContact/Default.aspx>

Feel free to email me with any questions.

Greater Capital Region Science and Engineering Fair

Joan Wagner, Fair Director
www.gcrsef.org

The Greater Capital Region Science and Engineering Fair will take place for the 27th years at Rensselaer Polytechnic Institute on March 18, 2017. The Fair is a regional fair for the Intel International Science and Engineering Fair (ISEF) and the STANYS State Science Congress. There are two divisions. The junior division is for grades 6-8. Top projects are invited (all expenses paid) to attend the STANYS State Science Congress next June in Buffalo, NY. Some will also be invited to compete in the National Broadcom Masters Competition. This is similar to the Science Talent Search (STS) geared for high school students. The senior division is for grades 9-12. Top projects are invited to compete (all expenses paid) in the Intel ISEF finals to be held the week of May 14-19 in Los Angeles, California. Some projects will also be invited to compete in the STANYS Science Congress next June 2017.

If you do not presently have a science research course at your school or would like to involve students in science research, please feel free to contact me at: jsw2012@aol.com. Detailed information about the science fair can be found at the website: www.gcrsef.org.



Membership Milestones



Becky Remis, Membership Chair
membership@stanys.org

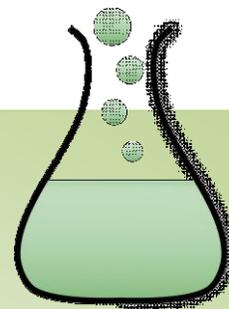
The Eastern Section Board of Directors is pleased to recognize the following people for their many years of continuous membership in STANYS:

50 or more years:	40 or more years:	30 or more years:
Joseph Drenchko Doug Reynolds	Robert Kuba Linda Shartzter Norman Shartzter Joanne Corey Peter Petrillose Fred Pidgeon	Joan Wagner Sharyn Kalinkewicz Ron Geuther Elaine Jetty Arden Rauch Tom Shiland Maria Russo Patricia Nolan Bertino

Each of these long-standing members will be recognized at the Siena Conference for their dedication to STANYS and their commitment to science education in New York State. Please plan to join us at the conference to congratulate them and let them know how much we appreciate their membership!

Hello Chemistry Colleagues,

Bill Brown, SAR Chemistry
wbrown@queensburyschool.org



Looking back to when I first started teaching chemistry, I see myself as a racehorse with blinders on. I ran the best way I knew how and even though there was a lot going on around me, I maintained focus on what I had to do to get me and my jockey to the finish line. I worried and focused only on my classroom, “my students”, my curriculum, my test scores, and my regents exam. I collaborated with fellow chemistry teachers in my district and STANYS, but the collaboration was to further prepare “my students” for the Regent’s exam. I didn’t see my job as any bigger than “my students” in my classroom.

It was three weeks after my oldest child started kindergarten at my district that I realized that I was falling woefully short of the dedication, work ethic, and the sense of purpose that my son’s kindergarten teacher epitomized. Mrs. Bemis did so much for my son in just three weeks to help him adjust to school life. I decided it was time to re-evaluate the expectations I had for myself as a teacher.

My son is entering 3rd grade this year and in these last three years I have tried to emulate all of the elementary teachers that I have met and worked with in that time. My high school science department and I have made goals each year to increase the amount of hands on science that our high school students do with our elementary students. The projects are a lot of fun for both the high school and the elementary students and I feel I am making steps towards being the teacher I want to be.

As we begin another school year, I encourage all of you to find your sense of purpose as a teacher, to find ways to reach out to your elementary colleagues, and to learn as much as you can about the drafted NYSSLS science standards and how to begin that shift to teaching chemistry through exploration.

New! Group Memberships!

Becky Remis
 Membership Chair
membership@stanys.org

A membership package of five (5) or more individuals joining or renewing as Regular Members from the same school district will receive a 20% discount on their membership dues. Each individual will be expected to submit a complete membership form referencing the School District Purchase Order or group payment. All will be enrolled at the same time and their memberships will begin the month the Purchase Order or payment from the School District, or payment from the group is received, or the membership extended if they are a current member. The membership dues are for the individuals enrolled and cannot be transferred or refunded. Groups interested in a membership package must contact the STANYS Data Manager for specific instructions.
membership@stanys.org

Staying In the

Science Loop

Jennifer Gecewicz, Intermediate SAR,
jen.gecewicz@gmail.com

It is easy to fall into old habits at the beginning year. We get our rooms set up, open last year’s Google Doc lessons, and voila - we are all set! Right?! Not so fast. I’d guess that it is **not** often that we have the exact same students with the exact same learning styles in front of us each First Day of School. I welcome the fresh, smiling (and sometimes stunned-that-summer-vacation-is-over) faces of my kiddos each September, all many of us excited about what are going to learn. Our students have yet to be the same as the previous year. That is why I will forever be a “student” myself, and more importantly why I participate in STANYS events.

Our Eastern STANYS section wants to meet your professional development (now CTLE) needs. We have recently started a Facebook page on which reminders for events will be posted and ideas can be shared. Feel free to join the Facebook group, [Eastern STANYS](#). You may also join our Remind App/email group. The Remind “class” is Eastern STANYS, and you join it by texting 81010 with the message [@stanyseast](#). That text will add you to the group and you will receive updates directly to your phone. Don’t use a smartphone or app-enabled device? Remind messages can be sent via email. Just go to <https://www.remind.com/join/stanyseast> for further directions. Please be patient with us as we take on this endeavor, but know that we have your best interests in mind! We are planning some great PD opportunities this year, and we’re looking forward to having you join us in staying in the loop!



Deborah Mabey,
NBCT
NY State Master Teacher
Environmental SAR

Recycling is one of the easiest and most effective actions ANYONE can do to protect natural resources, conserve energy, reduce greenhouse gas emissions, and create jobs. Recycling also provides materials that are made into new products. Want to ignite recycling in your school? Friendly competition is a proven way to motivate young people toward adopting sustainable behaviors.

Recycle-Bowl helps to ignite or improve recycling in elementary, middle and high schools across America. Registration is NOW open. Check out <https://www.kab.org/recycle-bowl/> for more information and to register your school. Please note that the deadline to enter is 10/14/16 and that the competition starts on 10/17/16 and runs through 11/15/16.

35th Annual

Eastern Section STANYS Fall Conference at Siena College

Friday, October 14, 2016

Agenda

3:00-4:10 pm Exhibitors, refreshments,
registration (Sarazen Campus Center)

4:10-4:25 pm Welcome, SED Update (Sarazen
Campus Center)

4:30-5:20 pm Session I

5:40-6:30 pm Session II

6:45-7:45 pm Dinner (Serra Hall)

7:55-9:00 pm Door Prizes and Keynote Speaker
(Sarazen Campus Center)

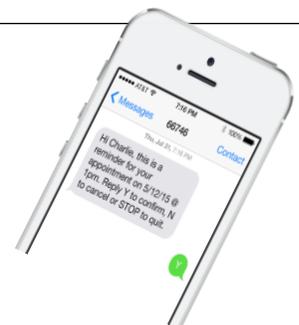
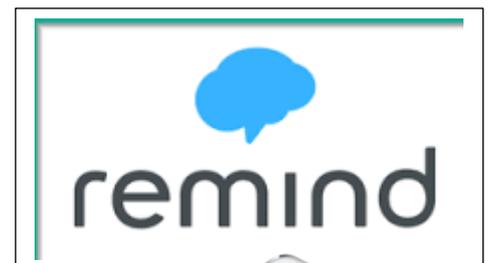
**See our offered
workshops and registration
information on the
next pages!**



EASTERN STANYS ANNOUNCEMENT

Eastern STANYS:

“Welcome to Eastern STANYS! We are looking forward to using Remind to share updates about STANYS events. Thanks for joining!”





35th Annual
Eastern Section STANYS
Fall Conference
at Siena College

Offered Workshops

Session I: 4:30-5:20 PM

A. Stellar Evolution and the HR Diagram. *Valerie Rapson, Ph.D, Outreach Astronomer at the Dudley Observatory; Megan Norris, Planetarium Director at miSci.* We will discuss the lifecycle of stars, the Hertzsprung-Russell diagram, and conduct an activity that can be reproduced in the classroom. *Earth Science, General. Siena 101*

B. The Who, Where and Why of Scholarly Resources in the High School Biology Classroom. *Paula Dellavilla, high school science teacher, Schalmont High School; Emer O’Keeffe, high school librarian, Schalmont High School.* This presentation will discuss implementing a biology research project using information literacy skills (academic vs. popular articles, locating and evaluating appropriate scholarly sources), wherein students write a bibliographic essay as the final product. **Siena 119**

C. Reading and Writing to Learn Earth Science. *Becky Remis, NBCT, DAL Earth Science; Karen Rogotzke, literacy coach, Schalmont High School.* Engage students in the claim-evidence-reasoning cycle using literacy strategies that promote critical thinking and content understanding. We will share examples of our ELA, AIS and science classroom collaboration. *Earth Science, General. Siena 120*

D. Space Geology. *Joan Wagner, Focus on Learning, Eastern STANYS SAR for Informal Learning, Dudley Observatory.* These hands-on activities are taken from the Dudley observatory summer workshop that

ran for 5 years at RPI. These activities include identifying asteroids and Mars Exposed (geology of Mars using satellite images). *Earth Science, General. Siena 117*

E. POGIL: A Student-centered approach to inquiry. *Mrs. Leigh Feguer, NBCT, Schenectady High School; Mr. Josh Conway, biology teacher, Troy High School.* Come learn about the POGIL strategy and how you can use it to transform your classroom with this student-centered approach to inquiry. *Biology, General. Siena 125*

F. Green Chemical Experiments. *Dr. Lucas Tucker and Ann Klotz, Department of Chemistry and Biochemistry, Siena College.* Methodology for developing experiments that fit the Regents chemistry curriculum will be discussed. Participants will complete microscale solubility and electrochemistry experiments. **MSC 240/241**

G. 10 Tools to Improve Student Learning. *Sharon Trova, chemistry teacher, Amsterdam High School.* 10 techniques will be presented to help students learn and make sense of material on their own with your guidance. These tools lead to increased performance and understanding. *Chemistry, general. Siena 105*

H. Help Your Students Reach for the Stars. *Jen Gecewicz, SAR-Intermediate, Ichabod Crane Central School; Laura Van Glad, SAR-Earth Science, Jefferson Central School.* Come explore ways to engage students in learning about astronomy using phenomena-based activities. Take away ideas that can be adapted for various grade levels in any classroom. *Earth Science, general. Siena 123*

I. Questar III Summer Research Institute for Science Teachers. *Jane King, School Improvement Specialist Questar III BOCES; Ashley Woitkowski, Earth Science Teacher, Lansingburgh HS; Darlene Hunter, Earth Science Teacher, Averill Park High School; Ben Long, Living Environment Teacher, New Lebanon High School; Kara Sokolowski, Environmental Science and Earth Science Teacher, New Lebanon High School.* Come and learn about an amazing summer experience that gives you the opportunity to work

side by side with a scientist in the Capitol District, conduct real research, and develop lessons that can be used in your classroom. Earn a generous stipend as well as funds to purchase science resources. Become part of a cohort of “Science Fellows” who have learned how to take current research science into their classrooms and grow our students’ interest in STEM. **Siena 121**

J. Fantastic Fermentation! *Jessica Vaccaro-Piper, Jamie St. Denis, Vicky Boulay, Katie Calhoun, New York State Master Teachers.* Discover simple and fun experiments to enhance students’ understanding about fermentation. Participants will have the opportunity to try several lab activities using cost effective supplies and easy set-ups. *Biology.* **RB 238**

K. SEI (Solar Energy International) Introduction to Renewables. *Joanne Coons, Solar Energy International.* RE100: Introduction to Renewable Energy- SEI’s Free Online Course! Learn about energy from the sun, wind, water, energy efficiency, and the basics of electricity. *General.* **RB 302**

L. Lead from the Classroom. *Deborah Mabey, NBCT, New York State Master Teacher, Environmental SAR-Eastern Section, Hoosick Falls High School.* To date, policy has been done TO teachers instead of WITH teachers. Wouldn’t it be great to change that? This session will offer suggestions for how to get involved, and explore teacher leadership opportunities that allow teachers to stay in the classroom. *General.* **Siena 106**

M. Roller Coasters for All Classrooms. *Jody Visconti, Living Environment, Environmental Science, Saratoga Springs High School; Ankie Meuwissen, Physics and Earth Science Ballston Spa High School.* Learn to use roller coasters to teach about speed, velocity, energy, energy conversion, momentum, and engineering design and guarantee a fun hands-on lesson or entire unit. *Physics, General.* **Siena 122**

Session II 5:40- 6:30 PM

N. Make it Stick: Infographics, Concept Maps & More *Mrs. Jody Suprenant, Capital District Master Teacher, Fort Edward, UFSD.* Wondering how to weave the disciplinary core ideas, cross cutting concepts, and science practices of NGSS/NYSSLS together in a way that helps concepts stick with your students? Using recent discoveries in cognitive psychology outlined in the book Make it Stick, we will explore how concept maps, infographics & more outside the box strategies can provide concrete ways to help our students become more productive learners. **Siena 105**

O. So, Just What is this ARDUINO Thing? *Tony Malikowski, Capital District Master Teacher, Hoosick Falls Central School.* Using inexpensive kits, we will explore the DIY electronics phenomenon that is the Arduino. Potential applications to various science curricula will be discussed. *Physics, general.* **Siena 122**

P. Streamlining the Earth Science Performance Test. *Laura Grooten, earth science teacher, Shaker High School and Jessica Sanderson, Assistant Middle School Principal, Niskayuna High School.* Participants will learn a new way to store /organize performance test materials and directions so they can be set up easily year after year. *Earth Science.* **Siena 120**

Q. Sound Symphony: Connecting Endangered Species, Arts, and the Properties of Sound, NYSSLS Style. *Katy Perry, K-8 Science teacher, Robert C. Parker School, Chairperson Eastern Section of STANYS.*

A STEAM Elementary Science unit. Hands-on and Handouts! Blending ecology and physical science, students explore the properties of sound while researching a foreign country's endangered species. Students create a poster about their species and the threats it faces, invent an instrument to mimic the animal’s sounds, and explain how sound energy

travels. Performing their calls, songs, and roars during the final symphonic production, the students are silenced, one by one, to represent the disappearance of the species. Aligned to draft NYSSLS standards. *General. Siena 101*

R. Tricking Kids into Reviewing with Play. *Ms. Nichole Mantas, Living Environment teacher, Lansingburgh High School and Ms. Dominique DiGiuseppe, Living Environment teacher, Saratoga Springs High School.* Reviewing is hard for kids until now. Come play and learn how to review using classic children's games- including Easter egg hunts, Candy Land, Trivial Pursuit and more! *Biology. Siena 119.*

S. Making Disparate Connections: Stonewalls and magnetic field. *Professor John W. Delano, University at Albany.* Interdisciplinary problem-solving is used to show the pattern of change in Earth's magnetic field (9 degree shift in declination) since 1800. *Earth Science, General. Siena 123*

T. Creating NGSS Style Lessons for Regents Chemistry. *Bill Brown, SAR-Chemistry, Queensbury High School; Maria Russo, Director-Eastern STANYS.* Needed- chemical phenomena that induce questioning and inquiry for the Regents chemistry classroom. Come to discuss the drafted chemistry standards and how they might change the way we teach Regents Chemistry. *Chemistry. RB 250*

U. PFOA and the Water Crisis in Hoosick. *Deborah Mabey, NBCT, New York State Master Teacher, Environmental SAR- Eastern Section, Hoosick Falls High School.* In 2014, the chemical perfluorooctanoic acid (C8 or PFOA) was discovered in the drinking water in the Village of Hoosick Falls, NY. This session will explore the history, chemistry, hydrology and environmental policy/impact that PFOA has had of Hoosick Falls and communities all over the country. *General. Siena 106*

V. Breast Cancer Risk: Genes and the Environment. *Kelly Ryan, SAR Living Environment, NYS Master Teacher.* Analyze a family pedigree, conduct a simulated test for the BRAC1 gene and analyze data

indicating that environmental exposure in childhood may increase risk for breast cancer. See how you can use this Science Take-out kit (and others) to enhance your Living Environment curriculum! *Biology. RB 238.*

W. Gaming in a Middle School Science Classroom. *Ben Early, 8th Grade Science Teacher, Acadia Middle School, Shenendehowa CSD.* A showcase of three examples of how to integrate video games into the middle school science curriculum. *General. Siena 121*

X. Mr. Suchman- so what, why do we care? *Mr. Joshua Conway, Troy High School; Mrs. Leigh Feguer, NBCT, Schenectady High School.* Discover how this inquiry model engages the natural curiosity of students. *Biology, General. Siena 125*

Visit our web page eastern-stanys.org for more information, or join us on our [Facebook](#) page



You are invited to the following event:
 EASTERN STANYS PUB SCIENCE SERIES,
 9/28, CAVES AND KARST OF THE
 HELDERBERG REGION, PRESENTED BY MIKE
 NARDACCI
 Wednesday, September 28, 2016 from 6:00
 PM to 8:00 PM (EDT)
 Brown's Brewing Co, 417 River Street, Troy,
 NY 12180

Thanks to Our Generous Sponsors!

The Master Teacher Program



Pearson

Wards Science

Aldon Chemical Corporation

National Geographic Learning

miSci/Challenger Learning Center

Science Take-Out

Also visit:

The Science and Engineering Fair

A special thanks to our gracious host,

Siena College

And to Dr. Lucas Tucker, our liaison.

STANYS Eastern Section, 35th Annual Siena Conference

Mail-in Registration Form

Go Green! Register on the EventBrite Site at: [EVENTBRITE](#)

Mail Registration Form to: Kelly Ryan, Registrar
9 Heather Lane
Rensselaer, NY 12144

Registration Deadline: Friday, October 8, 2016

Name: _____

Title/Position: _____

School/ Affiliation: _____

Level(s) Taught: Elem. ___ MS ___ HS ___ College ___

Preferred Address _____

City _____ State: _____ Zip: _____

Preferred phone:(_____)_____

Preferred e-mail: _____

Session Selection: Please provide a first choice and an alternate for each session.

Session 1 _____

(First Choice)

Session 1 _____

(Alternate Choice)

Session 2 _____

(First Choice)

Session 2 _____

(Alternate Choice)

Payment: Check one

___\$44 STANYS Member *please be sure your membership is current

___\$54 Non-Member Rate

___\$36 Pre-Service Teacher

___\$15 Presenters joining us for dinner

Please make checks payable to STANYS Eastern Section. No Purchase Orders accepted