37th Annual
Eastern Section STANYS
Fall Conference
At Siena College

STANYS
SCIENCE TEACHERS ASSOCIATION OF NEW YORK STATE

Friday, October 12, 2018

Agenda

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

4:10-4:25 pm Welcome, (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)

Session I: 4:30-5:20 PM

A. Make Your Own Videos for the Science Classroom. *Tom Gazda, formerly of Ichabod Crane High School.* Video can be for an invaluable teaching tool, especially in science. This session presents 16 ways that teacher-made videos can be used in your classroom. *General.* **Siena 123**

B. Using Google's Colaboratory to introduce programming in STEM classrooms. *Matt Bellis, Department of Physics and Astronomy, Siena College.* Google's Colaboratory lets students run python in a browser/Chromebook to make plots or perform more complicated calculations. Teachers provide feedback just like any Google Doc. *General.* **Siena 106**

C. Preparing "Phenomenal" Preservice Science Teachers. *Becky Remis, NBCT,* Science Teacher and Adjunct Associate Professor of Clinical Education, Martin Vysohlid, MAT Physics; Christie MacFarlane, MAT Earth Science; Dan Bruton, MAT Earth Science; Christine Brooks, MAT Chemistry. This session will articulate the development and implementation of a graduate-level science education course designed to train teachers in the three dimensions of the NYSSLS. Students will discuss their professional growth during the course and their developing understanding of the three dimensions. Phenomena used during 3-d lessons they created and taught will also be shared. *General*. **Siena 120**

D. Standards Based Grading. *Erin Bell, chemistry teacher, Saratoga Springs High School, NYSMTP.* Using Standards Based Grading in a High School Science Classroom: Two First Hand Accounts. *General, Chemistry.* **Roger Bacon 250**

E. Gamification: Ready Player? *Scott Beiter Science Teacher, Rensselaer Junior Senior High School, Margaret Kelliher, Burnt Hills-Ballston Lake Central School District, NYSMTP*: Gamification PLT. Game on! Use game mechanics to bring fun into your classroom. Learn the basics of what gamification is and how the presenters started gamifying in their classes. *General.* **Siena 125**

F. NYS NEXTgen SLS, Where to Begin? A Strategic Way to rollout NYSSLS in your classroom. *Nicole Dixson, Greenwich Central School, NYS Master Teacher.* The standards are adopted now where do you begin? This session will give you a real and practical way to start using NYSSLS now and transform your classroom and students into a student-centered, creative, problem solving environment. *General.* **Siena 121**

G. How I Became a NBCT, and What It Can do For You. *Jody Suprenant, NYSMT, NBCT, Hudson Falls CSD.* Are you ready to move from excellent, intuitive teaching to excellent, *purposeful* teaching? Do you want to enhance instruction for students, improve school culture, and open doors? Board Certification may be just the thing for YOU! We will discuss how to take the first steps toward Board Certification, manage the process, secure funding, and outline the numerous resources to support this endeavor. Wait and see the amazing changes that take place in your classroom, your school, and your community! *General.* **Siena 119**

H. Scaling the Universe. *Dr. Valerie Rapson, Outreach Astronomer; Megan Norris, Suits-Beuche planetarium director at miSci.* Explore different ways to teach the scale size and distances to planets, stars and galaxies in the Universe through hands-on classroom activities. *Earth Science.* **Siena 101**

I. Stem Cell Unit for High School Biology (made through an RPI summer program). *Elizabeth Hoover, Science Teacher, Shenendehowa High School*. A complete mini-unit on stem cells that is ready to use in the classroom. It touches on all the latest topics in stem cell research while tying into the high school living environment curriculum. Participants will leave with a PowerPoint presentation on stem cells with accompanying note packet, videos, articles, case studies, homework questions, and a complete lab write up/activity on gene chips. Topics presented will include what a stem cell is, the science behind reprogramming them, new uses/discoveries in stem cell research, and ethical concerns surrounding the medicinal use of stem cells. *Biology.* **Siena 117**

J. Under Pressure. *Jared Foro, Science Teacher, Guilderland Central School District.* Many science teachers go over the concept of "pressure" but do students really grasp it-especially as it relates to their daily lives? Using a simple model, we will go over strategies to explain pressure in terms of Earth's atmosphere and oceans! *Earth Science.* **Siena 105**

K. American Chestnuts: Schoolyard Restoration. *Emmett Hoops, Moriah Central and District 5 Representative for the NYS Chapter of the American Chestnut Foundation: Mollie Burgett, Middleburgh Central School District.* This session is designed to give educators the necessary background information, tools and resources to begin their own American Chestnut restoration project. Educators will be guided through the simple process of siting their two seedling plots, how to overcome potential hurdles along the way, given suggestion on how to incorporate their local communities and provided with local contacts to help along the way. *General.* **Roger Bacon 328**

L. Magic Squares in the STEM Classroom. *Deborah Mabey, NBCT, NYSMTP, DAL Applied Science.* Magic squares have been around for thousands of years. Learn how to create and use Magic Squares to deepen student learning in STEM Classrooms. *General.* **Siena 122**

M. Green Chemistry Laboratory Exercises. *Dr. Lucas Tucker and Ann Klotz, Siena College.* The workshop will consist of a brief introduction to green chemistry and then the opportunity to do two hands-on laboratory exercises. *Chemistry.* **Morello 240-241**

Session II 5:40- 6:30 PM

N. Developing Routine with Weekly Spaced Repetitive Practice (for all disciplines) *Shannon Hansen, Science Teacher, Ballston Spa High School, NYSMTP.* Today we will talk about learning through daily routines and you will leave with a new, personalized tool specific to your classroom (sign up with a friend in the same discipline). *General.* **Siena 106**

O. The Sand Lab. *Tom Gazda, formerly of Ichabod Crane High School.* In this lab students investigate various sand samples under magnification, comparing the size, sorting and roundness of grains. Various pre and post lab activities will also be provided. *Earth Science.* **Siena 123**

P. Teaching with the Incredible, Edible Egg. *Katrina Scarff, middle school science teacher, Ballston Spa Central School District.* Explore the chicken egg: structure, function, formation for both the unfertilized and fertilized egg. *Middle School, Biology.* **Siena 120**

Q. Shaping Your Students for Scientific Literacy. *Kaitlin McGann, Chemistry Teacher, Schodack Central Schools, NYS Master Teacher; Heather Flood, English Teacher, Shenendehowa Central Schools, Teacher Consultant for Capital District Writing Project.* Learn how a Chemistry and an English teacher cross-collaborated in a Scientific Communications course to build their students' skills in reading, writing, presenting and analyzing media in science. *General, Chemistry* **Roger Bacon 328**

R. Expanding Learning with Phenomena and Project- Based Learning. *Lisa Fort, Queensbury High School.* In this interactive presentation teachers will be able to see learning through the student's perspective when given a phenomenon and asked to conceptualize through a project-based learning experience. Some time will be designated for the teacher to investigate their own teaching to create the building blocks for learning in this model. (Example will be Earth Science content, but the experience is transferable to any science.) *Earth science, General.* **Siena 121**

S. The Miraculous Microbiome. *Jessica Piper, Jamie St. Denis, Michelle Nowak, Vicky Boulay, NYSMTP.* Explore the amazing organisms that lurk within us through lessons, labs, and activities based on the new NYS Science Learning Standards. *Biology.* **Roger Bacon 238**

T. Modeling Makes Sense in Biology. *Kelly Ryan, Shaker High School, NYS Master Teacher.* Participants will work through lessons on using and constructing models to understand and explain biological processes. Lessons will be designed to align with both the current Regents Living Environment curriculum as well as the NYSSLS in Life Science for the high school level. *Biology.* **Siena 117**

U. 3-D Share-a-thon for Rookie and Veteran Intermediate Teachers. *Jennifer Gecewicz, Ichabod Crane Central School; Laura Van Glad, Jefferson Central School*. An informal discussion about 3-D learning. Tips Paul Andersen shared at STANYS-NYSMTP events will be reviewed. Come prepared with a lesson and/or assessment idea you want to tweak. Take away ideas you can implement in your classroom right away. *General.* **Siena 119**

V. Transforming the Tried and True into NYSSLS New. *James Sommer, Science Teacher, Schalmont High School; Becky Remis, Science Teacher, NBCT, Schalmont High School.* Explore air pressure phenomena first hand just like your science students should, while engaging in a model three-dimensional lesson aligned to the NYSSLS. Workshop facilitators will also discuss the paradigm shift that transformed the "tried and true" into the "NYSSLS new". *Earth Science.* **Siena 105**

W. Using Lab Time to Incorporate the New Standards in Regents Chemistry. *William Brown, chemistry teacher, Lake George High School, Chemistry SAR.* Come to a Regents chemistry session where we will tackle how to incorporate more of the new standards into our classrooms by altering some common labs. *Chemistry.* **Roger Bacon 250**

X. Mr. Suchman - That Was Fun, Let's do it Again! *Mrs. Leigh Feguer, NBCT, Mr. Joshua Conway- Schenectady High School* Discover how this inquiry model engages the natural curiosity of students through the use of phenomenon, models and observations in one class period. If you attended our Jell-O Suchman session in the past, we will be presenting a new Suchman lesson and providing the clues for use in your classroom. *General.* **Siena 125**

Y. STEM-ulating Activities in Population and Human Ecology. *Deborah Mabey, NBCT, NYSMTP, DAL Applied Science.* Participants will engage in hands- on activities that can be used in their classroom. Each participant will leave with lessons and materials that could be used in their classroom. *General.* **Siena 122**

Keynote Address

7:55-9:00 PM Sarazen Campus Center

Breaking Barriers by Paying It Forward: The Power of Mentors and Role Models

Magdia De Jesus Ph.D., Assistant Professor, Department of Biomedical Sciences, University at Albany. Division of Infectious Diseases, Wadsworth Center, New York State Department of Health. Wadsworth Center, David Axelrod Institute.

Learning is a unique and personal experience to our students that is influenced by physiological, social, behavioral, economic and emotional factors. However, all of these factors can be viewed as two sides of the same coin, they can be used as a way to negatively label students that in the long run can have detrimental effects on learning and self-esteem. Alternatively, these same factors can be used to create labels that support and empower all students. In this Keynote address, Dr. De Jesus will speak about breaking the barriers of labels by using the power of mentors, role models and pipeline mentorship programs that generates a feedback loop mechanism called "paying it forward".

Dr. Magdia De Jesus received her Ph.D. in Microbiology and Immunology from the Albert Einstein College of Medicine in 2009. Subsequently, she served in two postdoctoral appointments with the Wadsworth Center of the New York State Department of Health – first as an Emerging Infectious Disease Fellow under the sponsorship of the Center for Disease Control (2009-11), and second as a Postdoctoral Fellow under the sponsorship of the Howard Hughes Medical Institute (2011-14). She joined the School of Public Health at the State University of New York at Albany in September 2015 as an assistant professor of biomedical sciences. Dr. De Jesus has co-authored more than thirty scientific papers. Her most recent research seeks to understand (1) how the intestinal immune system recognizes fungal microbes such as *Candida albicans* (2) to develop oral based vaccines against *Candida auris*, a new antifungal resistant emerging pathogen. Dr. De Jesus was born in Puerto Rico and raised in Harlem, New York City. She credits her interest in an academic career in science to a "pipeline" of mentors throughout her educational journey. Her academic journey has led her to develop "A scientist looks just like you" program to educate and inspire children in grades 3-12 to understand that they too can be scientists regardless of background or socioeconomic status.

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A special thanks to our gracious host,

Siena College

And to Dr. Lucas Tucker, our liaison.

STANYS Eastern Section 37th Annual Siena Conference

Mail–in Registration Form – Please use Eventbrite for the electronic registration

Siena College, Friday, October 12, 2018 from 3:00 to 9:00 PM

(Check in, refreshments, and exhibits from 3:00 - 4:10 PM. Introductory remarks at 4:15, then the sessions begin at 4:30. Dinner is at 6:45, the Keynote Address and door prizes will follow dinner at 7:55)

Important: All participants AND presenters must pick up materials at the registration desk located in Sarazen Campus Center

- ✓ Fill in the registration information specified on the form below.
- ✓ Make out a check for the appropriate amount:
  - **$ 44 for STANYS members**
  - **$ 54 for Non-members**
  - **$ 36 for students or pre-service teachers**
- ✓ Make checks payable to: ***STANYS Eastern Section***

  Purchase orders will NOT be accepted!

- ✓ Mail the registration form, along with your payment, postmarked by **Friday, October 5, 2018** to:

  Kelly Ryan, Registrar, 9 Heather Lane, Rensselaer, NY 12144

  No one will be officially registered unless full payment is received.
  Registration questions: contact Kelly Ryan at kellyryan@ncolonie.org.

Please mail the bottom portion of this form with your check, retain the top section for your information.

✂----------

Name_____

School or affiliation: _____

Grade level: _____

All information provided will be treated as confidential and will only be used for registration purposes.

Preferred address: _____
street **city** **zip code**

Preferred phone number: _____

Preferred email: _____ **(please print)**

Session Choices:

Session 1 First choice: _____ **------> *Alternate* choice for Session 1:** _____

Session 2 First choice: _____ **------> *Alternate* choice for Session 2:** _____

*You will **always** get your first choice unless the session is filled or cancelled. ---- Register early!!*
If you have no second choice, you will have to choose from what is available on the day of the conference.

Check one:

***Member** _____ **Non-member** _____ **student/pre-service** _____ *** Please be sure your membership is current.**

Amount enclosed $ _____