Session 1, 5:00 - 5:50 PM		
A	**Science is Music to My Ears**	**ELS 136**
	Fred Pidgeon - *Retired, Past STANYS President* This session will engage the participants in expanding their curriculum through the use of music. Music is a universal language and playing music during lab time or hands-on activities create a calmer learning experience. The participants in this workshop will create a music song or rap using materials from their lessons. It is a fun way to engage the students and even the English language learners and underachievers will perk up when they see the teacher relating science to music. **Target Audience:** Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Special Education/ELL	
B	**Bruce Lee's One Inch Punch**	**ELS 134**
	Scott Beiter - *NYS Master Teacher* The "one-inch-punch" by legendary martial artist Bruce Lee is used as a phenomena to start student-led inquiry into forces and Newton's Laws. In this session the presenter shows how using a boxing glove and Vernier Education force plate can be used to motivate and engage students to design, implement, and analyze an experiment regarding force, mass, and acceleration. The diverse needs of all students are met as ALL students are motivated to punch, and record and analyze data. **Target Audience:** Intermediate, High School, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.)	
C	**Using Green Chemistry to Implement NYSSLS Based Labs**	**ELS 132**
	Stefanie Loomis and Annette Sebuyira - *Catskill High School* This session is designed to empower educators with green chemistry practices which will aid in acquiring the knowledge, skills, and opportunity to engage and collaborate with parents, families, and other community members. Educators will learn how to practice more sustainable methods to improve instruction and student achievement in a respectful, trusting, and safe environment. **Target Audience:** Elementary, Intermediate, High School, Chemistry, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.)	

D	**Reflecting on Initial Attempts at Creating NYSSLS Aligned Earth Science Storylines**	**ELS 130**
	Dan Bruton - *Shaker Middle School* This session will include attendees experiencing an anchor phenomenon for a 4 week storyline on cycling of earth's materials with subsequent investigations on minerals, rocks, water cycle, weathering and erosion, acids and bases and pollution. Reflection and opportunities to discuss successes and areas of improvement within this storyline will also be included. **Target Audience:** Intermediate, High School, Earth Science, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.)	
E	**National Board Certification - Professionalizing Teaching**	**ELS 236**
	Annette Romano - *National Board Council of New York* There is over a decade of research to support the positive impact that National Board Certified Teachers have on students. This session will provide information about the requirements, resources, and available supports. See why pursing NBC nay be the next step in your career. **Target Audience:** Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Special Education/ELL, Administration	
F	**Therapy Dogs in the Classroom**	**ELS 234**
	Hilary Llewellyn-Southern and Rose (certified therapy dog) - *Mont Pleasant Middle School* This session provides an overview of the benefits to students in having the comforting presence of a trained, calm dog in the classroom. Research shows that there are measurable health benefits to people who interact voluntarily with such dogs, including physical and mental health. Socializing with a well behaved dog breaks down barriers and relieves tension, can defuse anger, and engage students who may feel isolated or angry. **Target Audience:** Elementary, Intermediate, High School, Earth Science, Biology, General Science, Applied Sciences, Special Education/ELL	

G	**"NYSSLS is Coming!"—How to Confidently Dive in and Embrace Three-Dimensional Learning**	**ELS 232**
	Nichole Mantas - *NYS Master Teacher* To help students gain confidence with three-dimensional learning, teachers must embrace, practice, and implement the SEPs and CCCs in our classes. Now. This session will be helpful for those who have dipped their toe in the pool but want actionable steps to implement in their classrooms. In this workshop, participants will learn strategies for making three-dimensional, inquiry, and mastery learning more visible. **Target Audience:** Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science	
H	**Smithsonian Science for the Classroom and Supporting the Elementary Science Programs (Part 1)**	**ELS 240**
	Heidi Aupperle - *Carolina and Capital Region BOCES Trainer* This session will focus on introducing/reintroducing Smithsonian Science for the Classroom. We will unpack the program to see how the NYSSLS and NGSS are addressed. We will look to see the program is designed to establish instructional strategies that focus on inquiry in the elementary classroom thus improving instruction and student achievement across the K-5 grade levels. **Target Audience:** Elementary, Special Education/ELL, Administration	
I	**Implementing Illinois Storylines in NYS**	**ELS 238**
	Desmin Lichorat and Darlene Nichols - *Ballston Spa High School* We adapted the Illinois Storyline for our Biology classes to create a comprehensive curricular product! We'll share how to navigate Illinois lessons, implement the curriculum for all levels of learners including co-taught, regents, and honors-level classes, and important modifications and adaptations to the lessons and timeline to ensure that your students are prepared for the Living Environment Regents Exam! We'll also explain how the Illinois storylines helped us write our own disease storyline that aligns to Illinois' overarching story and both the NYSSLS and Regent's curricula and the reason this addition was necessary. **Target Audience:** High School, Biology, Special Education/ELL	

J	**What We Know About the New Fifth Grade Assessment (3-5)**	**ELS 239**
	Katy Perry - *Eastern Section STANYS Chairperson* The new 5th grade science test is coming soon! We will unpack the most recent information, explore test and curriculum connections, and share ideas to bolster student confidence and success for all learners. **Target Audience:** Elementary, Administration	
K	**Social Justice in the Science Classroom**	**ELS 332**
	Adrienna Kudrewicz and Marianne Carus - *Troy Middle School* “Science is a human endeavor.” One of the best ways to engage our students in their study of science is to show them how they have been (or have not been) represented through time in these scientific pursuits. Learn how to bring the stories of people like Carlos Finlay and Jane Cooke Wright into your science classroom in a developmentally appropriate, respectful, and equitable way, and watch student interest and achievement soar. **Target Audience:** Intermediate, High School, Biology, General Science	

Continue to the next page for Session 2

Session 2, 6:00 - 6:50 PM		
L	**Accommodations for students with disabilities within a lab environment**	**ELS 136**
	Aditya Rajmane and Lisa Reittinger - *Iroquois Middle School* Strategies and accommodations used to support students with disabilities and ELL's. This session would expand and cover current accommodations provided in Niskayuna CSD's Technology Education Program at the Middle Level. **Target Audience:** Intermediate, High School, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Special Education/ELL, Administration	
M	**Microplastics and Weather - Lessons from STEM Research Institute**	**ELS 134**
	Judy Selig and Crystal Perno - *NYS Master Teacher* What do microplastics and weather have in common? Both presenters worked with scientists this summer. Judy worked on microplastics' effect on Lake George zooplankton. Her storyline lessons begin with a phenomenon that leads to students experimenting with Daphnia and glitter. Crystal worked with the NYS MesoNet. Her lessons have students look at local seasonal data to help Superintendents make a snow day decision about a snow storm and whether an important baseball game can take place. **Target Audience:** Intermediate, High School, Earth Science, Biology	
N	**Animals in the classroom: Lowering Stress & Increasing Engagement**	**ELS 132**
	Devin Robinson - *Troy High School* In this workshop teachers will learn all about the utility of animals in classrooms. The benefits of having an animal in the classroom are endless, and this workshop will look at research that has targeted and identified the benefits, as well as teaching strategies, collaborative teacher engagements, and specific animals that make great additions to classrooms. Teachers will also participate in a short research opportunity to exemplify the research presented in the workshop. **Target Audience:** Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Special Education/ELL, Administration	

O	**Using the Question Formulation Technique (QFT) to Spark Curiosity and Drive Phenomena Forward**	**ELS 232**
	Nichole Mantas - *Saratoga Springs High School* If the QFT book has been on your to-read list, come try it out! In this session, participants learn the QFT strategy to help access the SEP: Asking Questions. Participants will ask a plethora of questions--quality, juicy, thought-provoking questions, so that you can do the same with your students in class on Monday. **Target Audience:** Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Special Education/ELL, Administration, QFT is great for any content area!	
P	**Electric Vehicles - Battery or Hydrogen Fuel - You Decide!**	**ELS 130**
	Karyn Rees - *NYS Master Teacher* This session will be focused on a project based learning opportunity based on the electric vehicle. The popularity and desirability of electric vehicles raises many questions about how these vehicles will be fueled. Students will be guided through a series of research articles and ultimately use Google Slides to debate the merits of a battery electric vs hydrogen fuel cell powered vehicle. **Target Audience:** Intermediate, High School, Chemistry, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.)	
Q	**Astronomy From a Backyard: Introduction to Astrophotography**	**ELS 236**
	Luca Marinelli - *General Electric Scientist and Amature Astronomer* In this session, we will discuss concepts in astronomy focusing on the life of stars in our galaxy from birth to cataclysmic explosions. We will talk about star nurseries in emission nebulae, the fate of stars like our own Sun (planetary nebulae), and signatures of massive star explosions (supernova remnants). I will introduce concepts of astrophotography or how we capture images of these celestial objects and use imagery throughout the presentation to exemplify concepts. **Target Audience:** Intermediate, High School, Physics, General Science	

R	**Siena Physics Dual Enrollment Offerings**	**ELS 234**
	George Hassel - *Siena College* I will present information about current dual enrollment courses in General Physics through Siena College, as well as some of the other present and future course offerings. These courses allow students in participating high schools to directly earn college credits. **Target Audience:** High School, Earth Science, Physics, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Administration	
S	**Can Insects Save the World?**	**ELS 332**
	Laura Van Glad - *STANYS Eastern Section Earth Science SAR* Join us for a hands-on workshop! Follow the story of two college roommates as they explore possible protein sources in their diets. Are all protein sources equal in value? What effect does protein food production have on the environment? Why would someone choose to limit their source of protein? This is one of the new lessons from the University of Rochester's Life Science Learning Center. Get free lessons to use with your class. **Target Audience:** Intermediate, High School, Biology, General Science	
T	**NYS P12 Science Learning Standards Update**	**ELS 238**
	Ashleigh Fraley - *NYS Education Department* This session will present the many resources that the New York State Education Department Office of Standards & Instruction has developed to assist educators with NYSP12SLS Implementation. Participants will interact with the NYSP12SLS Standards in a way that will introduce the shift in practice, increasing familiarity with the 3 dimensions of science learning. **Target Audience:** Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences (Environmental Science, Engineering, Forensics, etc.), Special Education/ELL, Administration	

U	**Focus on Science and Engineering Practices**	**ELS 239**
	Martin Vysohlid - *North Warren Central School* and Becky Remis, NBCT - *STANYS Fellow* We will share experience with a new class that focuses on Science and Engineering Practices. Simple equipment can lead to a great inquiry, and engages multiple levels of students. For some students it was hands-on experiments and improving observation and writing skills, for other students it was more like real research, working on experimental design and reasoning skills. We would like to share our experience but also leave some time for discussion and new ideas from other teachers. **Target Audience:** Intermediate, High School, General Science	
V	**Smithsonian Science for the Classroom - Taking the Next Steps Implementation and Beyond (Part 2)**	**ELS 240**
	Heidi Aupperle - *Carolina and Capital Region BOCES Trainer* This session will be a continuation of Session H. Participants will go beyond implementation of Smithsonian Science for the Classroom in improving student learning and inquiry in the elementary classroom to improve instruction and student achievement across the K-5 grade levels. **Target Audience:** Elementary, Special Education/ELL, Administration	