

Presenter	Co-Presenters	Workshop Title	Workshop Description	Content	Target Audience	Sess:
Anderson, Kate	Carlson, Scott	Safer Chemistry: Green Chemistry Replacement Labs	NGSS calls for all students to analyze problems and create solutions. Green chemistry is the design of chemical products or processes that reduces or eliminates the use and/or generation of hazardous substances. Green chemistry provides a framework and lens for learning, teaching and investigating chemistry concepts. Many traditional labs use chemicals that cannot be put down the drain and often put our students at risk if not handled properly. In this workshop, types of reactions, endothermic, exothermic and Le Chatelier's principle are all concepts that will be featured using inexpensive safer materials. Students are asked to assess the hazard of the materials in their labs and use Claims Evidence Reasoning (CER) to select the safer chemicals for their experiments. Learn how to "green up" lab experiments in your classroom from experienced teachers and an organization dedicated to promoting green chemistry principles and practice at the K-12 level. Participants will walk away with relevant open access resources that increase student engagement while increasing classroom	Chemistry	High School (9-12)	B
Appel, Ana		Diving into NYSSLS and NGSS: Performance Expectations	Are you new to the NGSS and NYSSLS? Do you keep hearing people talk about Performance Expectations and feel left out? Join me for a session where we dive into the three-dimensions and learn how to dissect Performance Expectations. Walk away with a jump start on how to begin teaching a standards aligned program in your classroom.	General Science	All Grades	B
ASCHER, Alan	BARBARA POSELUZYNY	What's Happening with the Test? An Assessment Update	With the introduction of the NYS-PK12-SLS we have been introduced to new teaching standards and instructional methods. The big question is how will these changes effect the current types of assessment used by NYS. In addition, what kinds of formative and summative assessments can most effectively be used by classroom teachers to measure student learning.	All subject areas	All Grades	C
Bertoglio, Kristopher		Start science class with a story	Why start classes with boring test questions, when that precious time could engage and excite students? Borrowing from basic storytelling and innovations in TCRWP, participants will explore the practice of beginning classes with dynamic, interesting examples of scientific innovation. Science stories promote engagement, support positive classroom culture, build fluency with the CCCs, introduce phenomena, build science literacy skills, and encourage students consume science journalism beyond the school day. All-in-all, they're a pretty good use of the first four to seven minutes of a class.	General Science	Secondary (6-12)	C
Bingman-Tennant, Benjamin	Javid, Ava; Galligan, Bryan	Math for America: A Community of Collaborative Teachers	We will present on Math for America's (MfA) fellowship opportunities and admissions process.	Fellowship information	All Grades	C

Buntschuh, Ingrid		Get Ready for the Transition to the New HS Science Standards	Participants will begin to prepare for the transition to the new New York State Science Learning Standards in High School by becoming familiar with the instructional shifts educators will need to make, focusing on those that can be made now, and becoming familiar with resources to aid in the transition.	General Science	High School (9-12)	D
Cronin, Anastasia		National Geographic's Geo-Inquiry Process in Action!	Learn how National Geographic's Geo-Inquiry process can further your students' understanding of the world and empower them to make a difference. In this interactive session, educators will learn strategies to help students develop the critical thinking skills to ask geographic questions, collect and visualize information, and take informed action.	General Science	All Grades	B
Cunningham, John		PD-Schmee-D; Show Me the Test!	This is a hands-on call to develop 3-D skills over the coming three years. Your formative assessments now will influence summative ones later.	General Science	Intermediate (6-8)	D
Danza, Michael Victor		3D Design & 3D Printing Simplified	In this workshop, you will learn 3D Design & 3D Prototyping using the new manufacturing technology such as 3D Printing as applied to your Project-Based Learning science, math, and engineering classes.	3D Design & 3D Printing Applied to Science, Math,	All Grades	A
Gillman, Joan		Straw Rockets are Out of This World	In this workshop, the participants will be designing, building, and testing their own straw rockets using a special launcher.	Earth and Space Science	Upper Elementary (3-5)	C
Gilson, Kathryn	Kramer, Heather	NGSS in Place-Based Service Learning Projects	Help teachers develop place-based service learning environmental education field trips by familiarizing them with NYC public lands resources, and connect this learning to objectives in the classroom. Teachers will learn about applicable citizen science projects, and how to engage with crowd-sourced mobile apps and data in lessons.	Life Science/Biology	Upper Elementary (3-5)	D
Gjika		Modeling Physics and Discussion Protocols	Workshop model each group will solve a different question regarding a topic. One group has collected data from a lab, other groups are solving similar questions using photos, diagrams and word problems. Each group will present their work. Students will employ discussion protocols to have equality of voice and engage in discussion as they modify their work from peer feedback. Misconceptions will be addressed in the context of our models. Student-teacher conference protocols will be employed to use DATA to design instructions. Parents can be invited to participate in these conversation and presentations.	Physics	High School (9-12)	D
Gonzalez, Adaliz		Three-Dimensional Learning and the new NYC P-8 Science Scope & Sequence	The workshop provides participants with awareness of the new NYSSLS, understanding of three-dimensional learning, and information pertaining the implementation plans of instruction using the new NYC P-8 Science Scope & Sequence.	General Science	Intermediate (6-8)	A
Gould, Stephen		Teaching about polymers	Introduce basic facts about polymers, with demonstrations of polymers with interesting properties.	Chemistry	Secondary (6-12)	B

Guarino Berg, Juliette	Christopher Kennedy	Seeing Science Everywhere: Strategies for Teaching Elementary STEM	This workshop will focus on ways to support children in the elementary grades as they gather evidence, ask and answer questions, make predictions, find patterns, and communicate their ideas. In “student mode,” we will uncover methods for using inquiry-driven, collaborative, and phenomena-based investigations with students to help them grow as active scientists. In “teacher mode,” participants will reflect on their own experiences with STEM in the elementary grades and consider how to best prepare our next generation of scientists and engineers. By the end of the workshop, participants will deepen their understanding of instructional strategies that support learning scientific skills and developing scientific attitudes while integrating mathematics, science, social studies, and	General Science	Primary (PreK-5)	B
Guiñals-Kupperman, Seth		Flip Your Lab!	Are you looking for an innovative way to make your labs include more inquiry but have strict time constraints? Would you like to use technology more meaningfully in your labs but are struggling to figure out how? Are you feeling stuck by having to choose between labs that are conceptually shallow or time-consuming to grade? Come to this session and see how using the flipped-classroom model can help make your lab give your students a true inquiry experience while giving you less of a headache!	Physics	High School (9-12)	D
Hart, Emily		Puzzles, Play and Problem Solving: Using Breakout EDU in your science classroom	How might we develop Breakout EDU challenge puzzles to preview, review, assess and extend science content knowledge? This workshop is open to all teachers who want to engage their students in dynamic problem solving scenarios much like Escape the Room games found throughout the city. The goal of the workshop is to expose teachers to the design process with the hope that teachers will utilize the design process to brainstorm, prototype, test and share a Breakout EDU puzzle for their classroom.	General Science	All Grades	B
Kellenberger, William		Modeling in the 3D Classroom	One of the SEPs under the NYSSLS standards is for students to Develop and Use Models. There are many different ways in which modeling can be used. In this workshop, we will show you how to use models as a means to kick off your unit/chapter, assist the students in designing their own experiments, or to assess their knowledge of the content. These strategies are proven effective for all students, including special education and English language learners.	General Science	Intermediate (6-8)	D
Kennedy, Christopher	Bauer, Patricia; Guiñals-Kupperman, Seth	Understanding Density through Active Learning in STEM	This workshop will introduce participants to modeling and active learning in chemistry, a student-centered, model-based and approach. We'll look specifically at ways to help facilitate student understanding of density on the particle level rather than simply being able to plug and chug. This introduction allows students to extend their understanding of the properties and behavior of matter in various phases. Teacher-participants will take away useful NGSS and NYSSLS-aligned resources and curriculum.	Chemistry	High School (9-12)	B

Levine, Joseph		UNDERSTANDING GLOBAL CHANGE: A CONCEPTUAL FRAMEWORK FOR HANDS-AND-MINDS-ON INTERDISCIPLINARY TEACHING	This is a followup to the Keynote Address. Understanding Global Change and explore the new interactive materials about scientific methodology and global change.	An interdisciplinary perspective of scientific issues covering all areas	All Grades	D
Lobello, Mary		You Want My Students to Design Their Lab?	In this workshop, I will share tried and true strategies to help your students achieve the Planning and Carrying Out Investigations component of the Science and Engineering Practices. These strategies and techniques work great with ELLs and SpEd students.	General Science	Intermediate (6-8)	D
Malina, Matt		Water Ecology and Engineering Field Trips	Teachers will be introduced to the NYC water system and our Water Ecology & Engineering Field Trips.	General Science	Secondary (6-12)	A
Marshall, Jason		Inspiring Great Thinkers and Innovators in K-8 Science	This session will look at steps and strategies that science teachers can use in preK to 8th grade science to encourage critical thinking, science discourse, and innovation in STEM and Science to create Inspired Students within the NYC Scope and Sequence	General Science	K-8	B
Mills, Holly		Increase Curiosity: Teach Students to Ask Better Questions	How can we increase student engagement while teaching strong critical thinking skills? Teaching students to ask their own questions using the question formulation technique (QFT) helps them become self-directed learners who are more deeply engaged in science content. In this workshop, participants will look at successful examples of QFT and have the opportunity to experience, practice and plan for QFT.	General Science	All Grades	A
Pidgeon, Sarah	Alsen, Karen; Colorado, Amy	Renewable Energy and Climate Change	How can we prepare our students to build a more environmentally sustainable future? Join Solar One for a session exploring how to incorporate renewable energy and climate change activities into your curriculum. Teachers will have the opportunity to participate in hands-on activities, discuss best practices for teaching about climate change, and workshop how to fit these topics into current curriculum. Solar One will provide all participating teachers will digital copies of all lessons plans and resources.	General Science	Intermediate (6-8)	C
Poseluzny, Barbara	Jessica poseluzny	CER (Claim-Evidence-Reasoning)	CER is a way for students to explain observed phenomenon in a scientific way and how observation and data from an investigation are connected to scientific knowledge. This strategy is teaching students to think like a scientist. We will model how to incorporate CER into your lessons.	Life Science/Biology	Secondary (6-12)	B

powel, jane	Andrea Conigliaro	Water, Water Everywhere!	Teachers will learn how to create stations in their classroom to enrich student understanding of H ₂ O. Experiments and models include: Breaking water, Gel Electrophoresis, Transpiration models, Hydrogen fuel cells, catalase enzymology, and edible water bottles. Labs are samples of OmniLearn Flex Text activities, designed to guide teachers through each of the units in the 2018 NYC Scope and Sequence and are aligned with NGSS Best practices, core disciplines and cross-cutting patterns.	Chemistry	Upper Elementary (3-5)	A
Reilley, Kaitlyn		Making the Science and Engineering Practices Accessible to ALL Students	Want to learn new techniques to make the Science and Engineering Practices Accessible for ALL Students? This workshop is for teachers who want to learn new ideas to make the Science and Engineering Practices accessible for all learners including students with disabilities and English Language Learners. Participants will be given the opportunity to collaborate and develop ways to take the strategies discussed in the workshop back to their own classrooms. Participants will leave the workshop with a toolkit of resources to engage diverse learners in using the Science and Engineering Practices!	Life Science/Biology	High School (9-12)	A
Rimler, Frank		Projectile Motion Activities with Nerf Guns	This presentation provides hands-on opportunities to use children's toys (Nerf Guns) as a method of learning about motion in 2 dimensions (Projectile Motion) and offers a diverse array of activities and assessments that students can engage in to learn about optimal launch angle, the scientific method, vector addition and trigonometry.	Physics	Secondary (6-12)	B

Scal, Roland	Alim, Nikita	Under the Foundations: an Examination of the Rocks and Minerals Forming New York's Bedrock	<p>There are four major rocks types in the bedrock of New York City, mica schist, marble, gneiss, and serpentine. All of these are of metamorphic origin. The minerals found in these rocks include: the micas (biotite and muscovite), quartz, plagioclase, potassium feldspar, calcite and dolomite common in Manhattan and Bronx, and serpentine minerals of Staten Island (66% lizardite and 27% chrysotile, which will not be investigated). Aside from these major rock types a brief summary of: 1) igneous rocks that cut the major rock types such as pegmatite and granite, and 2) the loose sediments of the city, will also be given with emphasis on how these rocks were affected by plate tectonics.</p> <p>In the workshop we will look at features of the bedrock forming minerals under the microscope, and we will prepare our own permanent slides. Mineral identifying characteristics will be explained. The microscope slides will be prepared using crushed and sieved mineral materials in the sand size range and mounting this in UV curing resin.</p> <p>Both microscopic and macroscopic feature of the rock forming minerals will be displayed and attendees will learn to recognize the major rock forming minerals in New York City.</p> <p>The physical characteristics of the rocks and how the minerals in them effect their properties will be described. From the microscopic to the macroscopic these characteristics have an impact on our urban environment and understanding the rocks can become important in aspects of city planning and future projects within the 5 boroughs.</p>	Earth and Space Science	High School (9-12)	D
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Scott, John		Smartphone camera magnification and microscopy	<p>Explorations and characterizations of microenvironments and their micro-inhabitants, and of micro-features and qualities of materials, require technology to magnify those environments and materials, and there are quite a few smartphone optical accessories and apps available to help teachers guide learners into understanding and investigation of biology and materials. We will explain, illustrate and demonstrate several smartphone optical accessories and apps particularly suited and amenable to classroom instruction, with practical suggestions.</p> <p>Workshop content will be placed in the context of NGSS/NYSSELS, relevant to Elementary, Intermediate and High School teachers. This presentation is aligned to the NYC Scope and Sequence 2018.</p> <p>An earlier version of this workshop also presented by John Scott, was very well attended and student-assessed in SCONYC's 2018 conference.</p>	General Science	All Grades	C
Shady, Ashraf		STEM-ulating Activities on Human Ecology	Discover innovative ways to teach about human-environmental interactions, while also building STEM skills through problem solving, mathematical modeling, interactive technology and more! Engage in hands-on activities addressing human population growth, natural resource use, biodiversity and climate change. Receive lessons matched to NGSS.	Earth and Space Science	Intermediate (6-8)	C
Shum, Sui King Dawn		Pressure Blocks and Ocean Sound	From atmosphere to earth, let us find how much pressure we encounter daily. Then we dive deep to ocean floors to explore how marine animals make use of underwater sound for sensing ocean environment and communicating.	Earth and Space Science	Intermediate (6-8)	D
Williams, Julie	Rebecca Abbott; Michael Kasloff	Navigating the Shifts: Making the Transition to the Next Generation Science Standards	How can district leadership support systematic transition to NGSS? Examine critical pedagogical and content shifts including the convergence with CCSS-ELA and Math. Experience an NGSS-designed curriculum exemplar from Amplify Science to envision the next generation classrooms you support.	General Science	Intermediate (6-8)	C
Williams, Julie (?)	Rebecca Abbott; Michael Kasloff	What's so phenomenal about phenomena?	You've probably heard about phenomenon-based instruction. Figure out what this actually means and how this is embodied in an NGSS-designed curriculum. Leaders from UC Berkeley's Lawrence Hall of Science will deliver this interactive presentation which will help demystify these new buzzwords by illuminating the Hall's research-based pedagogy and curriculum approaches.	General Science	Primary (PreK-5)	A

Williamson, Ellie	Nelson, Suzette; Ramos, Arlent	Thinking and Reading Between the Lines With HHMI BioInteractive Resources	<p>Many students struggle with understanding science concepts. They also find it difficult to interpret texts filled with science vocabulary. How do we help students to develop the skills that they need to analyze science texts in an authentic manner? What supports can we offer students to authentically understand scientific writing and real data? In this workshop you will learn literacy strategies which provide entry points to content that you cover in your classes. These strategies can be easily added to your practice in order to become class routines. The strategies that will be shared include: I2 (I see, I Interpret), CQU (Comments, Questions, Underline) and Argument Talk. They will be modeled so that you will experience the procedures for confident implementation into your class, and applied to free, classroom-ready HHMI BioInteractive resources to make these resources accessible to all your students. Additionally, the workshop will incorporate interpretation of authentic data used in HHMI resources. We will then reflect on the process and discuss the ways we can tailor the strategies to accommodate the needs of our students.</p>	Life Science/Biology	High School (9-12)	A
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