

Session I, 4:30 - 5:20 pm

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| A | The Magic of Science | Morrell Science Center 237 |
| <p>Joan Wagner, Focus on Learning</p> <p><i>I used to begin my 8th grade physical science class with a three-day "Magic" show. These demos act as an anticipatory set as to what will be learned in their science class that year. I would bring out the props again when the class topic related to them and sometimes the props appeared on the student assessments.</i></p> <p>Intermediate</p> | | |
| B | Shedding Light on Chemical Reactions | Roger Bacon 122 |
| <p>Scott Beiter, Rensselaer City School District</p> <p><i>A storyline for Chemical Reactions (MS-PS1-2, 5) will be shared. The storyline begins with using a glowstick dissection as a phenomena and progresses through to a laboratory investigation at the end. Though intended for intermediate level classrooms the storyline may be adapted for higher or lower levels.</i></p> <p>Intermediate</p> | | |
| C | Implementing Green Chemistry into Your Curriculum | Roger Bacon 144 |
| <p>Annette Sebuyira, Guilderland High School</p> <p><i>This session will equip teachers with ideas on how to make their already existing labs more green.</i></p> <p>Intermediate, High School, Chemistry, General Science</p> | | |
| D | Bees: Biology, Behavior and the Environment | Roger Bacon 208 |
| <p>James St. Denis; Vicky Boulay; Jessica Piper, NYS Master Teacher Program</p> <p><i>This hands-on session will provide the content knowledge and skills to bring bee related concepts into your classroom. Bees are fascinating organisms, providing biology, behavior, and environmental science connections at all grade levels. Collaborate with teachers to explore the hive and its community, discuss apitherapy and hive products used by bees and humans, and explore lessons for your classroom.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Biology, General Science, Applied Sciences</p> | | |

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| E | Three Battery Bulbs Labs to Understand Producing Electricity | Roger Bacon 210 |
| <p>Bob Neudel, Albany Academies</p> <p><i>We will complete 3 labs where students can see how electricity can affect magnetism and magnetism can affect electricity. Lastly-- we will make a simple electric motor. Teachers can expand this to student projects in how to use wind, solar and water to help solve our energy needs.</i></p> <p>Elementary</p> | | |
| F | Astronomy in Motion | Roger Bacon 226 |
| <p>Valerie Rapson, Dudley Observatory at miSci</p> <p><i>Students learn most efficiently when they have the opportunity to be active in the classroom. Astronomy in Motion will provide teachers with kinesthetic activities to help students visualize and practice difficult astronomy concepts. These activities are designed for students of all grade levels, and help teach topics such as: rotation and revolution, seasons, moon phases, constellations, Kepler's laws of motion, star and planet formation, stellar evolution and more.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Physics</p> | | |
| G | Argumentation in LE Lab | Roger Bacon 250 |
| <p>Becky Remis, Schalmont High School</p> <p><i>Shifting traditional Living Environment Labs to meet the 3-D expectations of the NYSSLS is possible! Learn how I modified and expanded labs on Catalase Enzyme Activity and Population Dynamics to incorporate the practices of Engaging in Argument from Evidence and Designing and Carrying out an Investigation. These labs include both written and online assessments, and facilitate the engagement of all students as they collaborate and communicate with their peers.</i></p> <p>High School, Biology, General Science</p> | | |
| H | Dig into Soil | Roger Bacon 302 |
| <p>Deborah Mabey, Hoosick Falls High School</p> <p><i>Soils exist as natural ecosystems on the surface of Earth made up of macro and microorganisms, minerals, organic matter, air, and water. Soils are living systems that provide many of the most fundamental functions needed for life. Explore the biological, physical, and chemical components of soil through several hands on activities.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Applied Sciences</p> | | |
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| I | Don't get Ticked in your Classroom | Siena 101 |
| <p>Joellen Lampman; Colette McCarthy, Cornell Cooperative Extension of Albany County</p> <p><i>Avoiding Lyme and other tick-borne diseases requires avoiding a tick bite! Join Cornell University's Joellen Lampman as she talks about the different ticks in our area and their biology, the diseases they carry, and how to protect yourself and your students from being bitten.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Biology, General Science, Applied Sciences, Special Education/ELL</p> | | |
| J | How do you create an elective astronomy course? You Planet. | Siena 106 |
| <p>Laura Grooten; Dan Bruton, Shaker High School</p> <p><i>Participants in this session will explore lessons and activities designed to meet the abilities of all students using a variety of instructional strategies and appropriate use of technology. Lessons and activities in this session are designed for elective level astronomy and are aligned to NYSSLS Science and Engineering Practices, and Cross Cutting Concepts.</i></p> <p>High School, General Science</p> | | |
| K | Empowering Student with a Growth Mindset in the Science Classroom | Siena 117 |
| <p>Karyn Rees, Averill Park High School</p> <p><i>Growth mindset can change the way you approach teaching in your science classroom. Mindset identification, group collaboration, goal setting, power of praising the process and choosing our words will be discussed and modeled to promote perseverance, grit and motivation.</i></p> <p>Elementary, Intermediate, High School</p> | | |
| L | NYSERDA P-12 Schools Initiative | Siena 119 |
| <p>Tim Gilroy, NYSERDA</p> <p><i>NYSERDA's is encouraging schools to lower energy use while reducing greenhouse gas emissions, the leading contributor to climate change. NYS Schools spend roughly \$1 billion in annual energy costs while producing approximately 5.6 million metric tons of carbon dioxide. This initiative promotes clean energy efforts by educating, guiding, and assisting schools that implement clean energy projects and commit to sustainability-focused principles at their facilities and in the classroom.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences, Special Education/ELL, Administration</p> | | |
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| M | Greater Capital Region STEAM Exposition | Siena 120 |
| <p>Michele Famoso; Beth Vernold, NYS Master Teacher Program</p> <p><i>The 5th annual Greater Capital Region STEAM Exposition will be held on Saturday, May 16, 2020 at Colonie Central High School in Albany. Sponsored by the NYS Master Teacher Program and the South Colonie School District, the GCR STEAM Expo includes a high school student STEAM project competition and a Discovery Fair. In this session, educators will learn how teachers and students can become involved in the GCR STEAM Expo, with projects that compete for cash prizes or as exhibitors.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences, Special Education/ELL, Administration</p> | | |
| N | Your Local Land Trust - A Resource for Connecting Students to Nature and Science | Siena 121 |
| <p>Sarah Walsh, Mohawk Hudson Land Conservancy</p> <p><i>In this session, Mohawk Hudson Land Conservancy, the Capital Region land trust, provides teachers with several examples of how connecting with your local land trust can augment your classroom teaching, providing outdoor research and education space, programming that aligns with your class curriculum, internship opportunities for excelling science students and ways to connect with families and students in an outdoor education setting.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, General Science, Applied Sciences , Special Education/ELL, Administration</p> | | |
| O | How will I adjust my teaching style to adapt to the new NGSS standards? | Siena 123 |
| <p>Fred Pidgeon, STANYS</p> <p><i>This session is designed to help teachers transcend boundaries between parents, administrators, and students by helping the teacher create tools that bring disciplinary core ideas to life by using phenomena, science and engineering practices, cross cutting ideas, and mathematical analysis that formulate questions to help the student understand the core idea.</i></p> <p>Elementary, Intermediate, High School, General Science, Administration</p> | | |
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Session II, 5:40 - 6:30 pm

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| P | Making Claims From Evidence - An Introduction for Students | Roger Bacon 122 |
| | Lorenz Herrmann, Menands School <i>Participants will engage and collaborate in a model activity that will assist them in designing future activities centered around the NYSSLS Science and Engineering Principle of making claims and engaging in argument from evidence.</i> Elementary, Intermediate, General Science | |
| Q | Environmental Problem Solvers: Using the Engineering Design Process, Modeling and Evidence in the Elementary Classroom | Roger Bacon 144 |
| | Katy Perry, Schenectady City School District <i>How can you: Design a safe way for salamanders to cross the road; Invent a device to stop wildfires; Model ways to provide clean water for all? Participants will explore techniques blending maker space, EDP, and iteration-all while tackling human created environmental problems. Digital design programs, coding, physical modeling and more will be addressed.</i> Elementary, General Science | |
| R | The Little Phenomenon That Could | Roger Bacon 250 |
| | Jim Sommer; Becky Remis, Schalmont High School <i>Participate in a model three dimensional lesson that utilizes a simple anchoring phenomenon to engage all students across all disciplines. This lesson includes peerfeedback and model creation and revision strategies, designed to assist students and teachers in assessing learning. How the NYSSLS were used to align this phenomenon with the three dimensions will be made explicit so that participants can use a similar approach for their own lesson planning.</i> Intermediate, High School, Earth Science, General Science | |
| S | Drs. of Mantastown: Case of Multiple Sclerosis & Gene Expression | Siena 101 |
| | Nichole Mantas, Saratoga High School <i>What better way to teach phenomena than through relevant conditions and having the student put their thinking caps on? Here, you and students will discover why is multiple sclerosis (MS) more prevalent in different parts of the country and the world. In this session, you will play the role of a student, teacher, as well as a doctor, to analyze and determine existing trends in MS data from the US, and infer different environmental conditions that may affect gene expression related to MS.</i> High School, Biology, General Science | |
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| T | What the hail is a severe weather elective? Experience 3-Dimensional Learning | Siena 106 |
| <p>Laura Grooten; Dan Bruton, Shaker High School</p> <p><i>Participants in this session will explore lessons and activities designed to meet the abilities of all students using a variety of instructional strategies and appropriate use of technology. Lessons and activities in this session are designed for elective level severe weather and are aligned to NYSSLS Science and Engineering Practices, and Cross Cutting Concepts.</i></p> <p>High School, General Science</p> | | |
| U | Do Scientists Cheat? | Siena 117 |
| <p>Judy Selig, Ballston Spa High School</p> <p><i>Do scientists really cheat? If they do, what are the consequences? Do students have to make ethical scientific decisions? Participate in lessons that link scientific method to ethics in science. These lessons teach the scientific process by linking reproducible results, peer review and data presentation to ethical decision making. Activities are aligned with the NYSSLS Science and Engineering Practices and teach through case studies and student designed investigations.</i></p> <p>High School, Earth Science, Biology, Chemistry, General Science, Applied Sciences</p> | | |
| V | A New Approach to Grading | Siena 119 |
| <p>Jason Brechko; Paul Zachos PhD; Monica De Tuya; Patrick Taylor, Glens Falls Middle School, ACASE (Association for the Cooperative Advancement of Science and Education)</p> <p><i>Transitioning to NYSSLS is a perfect chance to develop a more meaningful and productive approach to grading. In this session we will outline weaknesses of conventional grading and present the results of our research with disaggregated student assessment data. Information of this type illuminates student attainment of concepts and skills, and social emotional goals. This informs both teacher and learner, allowing each to identify learning needs and priorities for future instruction.</i></p> <p>Elementary, Intermediate, High School, Earth Science, Biology, Chemistry, Physics, General Science, Applied Sciences , Special Education/ELL, Administration</p> | | |
| W | Regents Chemistry NYSSLS Implementation: What do we do next? | Siena 120 |
| <p>Bill Brown, Lake George Central School District</p> <p><i>This session will allow Regents Chemistry Teachers to discuss the NYSSLS changes to the curriculum and their impact on the new exam scheduled for June 2024. Topics will include: Changes in teaching practices that we have implemented so far. How can we prepare our students for our current Regents Exam while trying to implement changes? What are our goals for teaching during the 2023-24 school year?</i></p> <p>High School, Chemistry</p> | | |

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| X | Teaching from the Inside Out: Using the Stories and Innovations of STEM Entrepreneurs to Engage Your K-5 Classroom | Siena 121 |
| <p>Tricia Paradis, Slingerlands Elementary</p> <p><i>You can't be what you can't see" so come join grade three teacher Tricia Paradis and work through simple strategies to engage your students in science and STEM. Using relatable entrepreneur role models, investigations, and authentic applications—such as mushroom packaging and overhead lights that clean while they illuminate—Tricia will share easy, flexible strategies that changed the way she teaches and you can incorporate into science and non-science classes to teach "from the inside out.</i></p> <p>Elementary, Special Education/ELL, Informal educators</p> | | |
| Y | How to Teach Vectors in Physics? | Siena 125 |
| <p>Martin Vysohlid</p> <p><i>The session explores multiple ways to help students understand the concept of vectors in physics. I will share hands-on activities to investigate force, displacement and velocity vectors, and also experience with a project to correct airplane heading in a crosswind. This will be a starting point to brainstorm ideas to further improve instruction and student achievement.</i></p> <p>Intermediate, High School, Physics, General Science, Applied Sciences</p> | | |