The Long Island STEM Education Leadership Association (LISTEMELA) invites you to attend all the events for their Fall Conference on **Wednesday, December 4, 2019**. Attendees will have the opportunity to select STEM-focused or NYSSLS-aligned workshops and vendor exhibits throughout the day.

LOCATION: Crest Hollow Country Club, 8325 Jericho Turnpike, Woodbury, NY 11797

KEYNOTE SPEAKER: Michael Soskil

Sponsored by Teq

CONNECTED CLASSROOMS AND THE NEW WORLD OF LEARNING

As our world and our workplaces become more globally connected, our schools must adapt. In this inspiring keynote, we will examine incredible examples of children using global connections to change their world for the better, and explore how our schools can remain relevant by providing opportunities for students to learn with others from different locations, different backgrounds, and different cultures. Those in attendance will learn how free tools make it easy to bring the world into classrooms, engage students, and increase learning outcomes.

Michael Soskil, the 2017-2018 Pennsylvania Teacher of the Year, is determined to make learning meaningful for every child and to empower students and teachers as positive change agents in their communities. As an elementary STEM teacher he has inspired students to find solutions to problems in their local and global communities. As a speaker and professional learning facilitator he has helped educators around the world create opportunities for students to use learning to impact their world. For his innovative work, Michael was named one of the top-10 teachers in the world and a finalist for the Global Teacher Prize by Dr. Stephen Hawking in 2016. He also is a recipient of the US Presidential Award for Excellence in Math and Science Teaching in 2012. The book that Michael co-authored, Teaching in the Fourth Industrial Revolution, has been translated into multiple languages and heralded by leaders in education, business, and government as "an authoritative guide to teaching practice over the next three decades."

CONFERENCE AGENDA

Morning Events	Afternoon Events
7:45-8:15am: Registration & Breakfast	**12:15-1:15pm**: Luncheon
8:20-9:30am: Welcome Address & Keynote Presentation	**1:00-3:30pm**: Vendor Showcase
9:40-10:40am: Breakout Session #1	**1:25-2:25pm**: Breakout Session #3
10:50-11:50am: Breakout Session #2	
11:50am-12:15pm: Vendor Preview	

BREAKOUT SESSIONS

See workshop descriptions at the end of the registration document.

BREAKOUT SESSION #1: 9:40-10:40am

Science is a Verb! ***W.T. Clarke High School***

Integrated STEM Education: School and Not-for-Profit Partnerships ***Project Excel of the Huntington Youth Bureau***

Makerspace: Building Pedagogy into Design ***Oceanside Schools***

Introduction to NYSSLS Assessments ***Commack Schools***

Integrating Global Climate Change into the NYSSLS Through Storyline Development ***Commack Schools***

How to Use Phenomena to Make Gains in Student Inquiry ***STEMscopes***

The Future of Learning: Tomorrow and Beyond ***Discovery Education***

BREAKOUT SESSION #2: 10:50-11:50am

Innovating for Good: Developing Lifelong Problem Solvers ***Michael Soskil***

A New Approach to After-School STEM ***Hofstra University Center for STEM Research***

A Basic Approach to a NYSSLS Acid-Base Unit ***Commack Schools & Bay Shore Schools***

Something Like a Phenomenon: NYSSLS for Newcomers ***Wantagh Schools***

NYSSLS Elementary Storyline Creation Through Mysteries ***Adelphi University & Commack Schools***

Claim, Evidence, & Reasoning: Scientific Explanations to Increase Student Voice ***STEMscopes***

Integrating Engineering Into Your Physics/Physical Science Curricula ***Activate Learning & Inter City Baptist School***

BREAKOUT SESSION #3: 1:25-2:25pm

Exploring Nature-Themed Storylines Within the Middle School Curriculum ***Islip Schools***

Unpack 3-Dimensional Standards with Phenomenal Science Instruction ***Amplify Education***

Improve Student Achievement Through STEM Teacher Actions ***STEMscopes***

NGSS Assessments for Regents Courses: How to Lead & Develop a Workflow Process in Your School ***Great Neck Schools***

Productive Struggle and the Brain Science Behind Math & Science Learning ***Nassau BOCES***

Teaching Science in a 1:1 Environment ***Plainview-Old Bethpage***

A Systems Approach to Earth Science ***Activate Learning & Inter City Baptist School***

SCIMEX (SCIENCE MATERIALS EXPOSITION)
1:00-3:30PM

The Exhibit is interactive and showcases STEM resources, materials, text and online materials, field trip opportunities, and much more. The SCIMEX Exhibit is **free** and open to all teachers and supervisors.

FALL CONFERENCE REGISTRATION
WEDNESDAY, DECEMBER 4, 2019
CREST HOLLOW COUNTRY CLUB

To register, complete the following steps:

1. Go to tinyurl.com/LISTEMELA19 to fill out the **required** electronic registration form.
2. Once you have submitted the electronic registration form, please complete this payment form. Mail this form, along with a check or purchase order, to the address below. A separate form must be submitted for each participant from the same school district. All payments should be made payable to LISTEMELA. The registration fee includes the keynote, three breakout sessions, and a luncheon.

   $125 for LISTEMELA Members
   $160 for Non-LISTEMELA Members, which includes a one-year membership
   $75 for Pre-Service College Students, which includes a one-year membership

   Address: LISTEMELA
   P.O. Box 1493
   Commack, NY 11725

If you have any questions regarding registration, please feel free to contact Dr. Matt Christiansen, Conference Chairperson, at conference@listemela.org. You will be provided a CTLE form for professional development hours for the keynote address and the three breakout sessions.

Refunds will be honored up until November 25, 2019. All cancelations received after this date will be non-refundable.

Name of Participant: _____

School District/Organization: _____

Method of Payment (check one): ❒ **Personal Check Enclosed** ❒ **Purchase Order Enclosed**

WORKSHOP DESCRIPTIONS

SESSION ONE WORKSHOPS

SCIENCE IS A VERB!

Terry Renna, Georgia Gier, & Nurije Kerimi (W.T. Clarke High School)

Participants will learn about hands-on, science skills icebreaker activities for high school students using the 4Cs: communication, collaboration, critical thinking, and creativity.

High School, General Science

INTEGRATED STEM EDUCATION: SCHOOL AND NOT-FOR-PROFIT PARTNERSHIPS

Valerie Drakos & Malyk Leonard (Project Excel of the Huntington Youth Bureau)

This workshop will explore ways school districts can collaborate with community based agencies offering STEM/STEAM based programming.

Middle Level, Integrated STEM

MAKERSPACE: BUILDING PEDAGOGY INTO DESIGN

Donna Migdol & Amy Simon (Oceanside Public Schools)

This workshop is designed to provide a professional development paradigm for elementary educators to use as they develop and/or redesign sustainable Makerspace programs in their schools. The focus is on student-centered learning using new and innovative strategies to promote students as not only tinkerers who are involved in the engineering design process, but also as active thinkers. We highlight process rather than product, provide tangible models of pedagogy and curricula, as well as the big ideas that support the makerspace materials chosen.

Elementary, Integrated STEM

INTRODUCTION TO NYSSLS ASSESSMENT

Justin King (Commack Schools)

NYSSLS-based assessments are coming soon and we need to start preparing ourselves and our students. At this workshop we will review some NGSS-based assessments and learn how to use the 3D Assessment Screening Tool developed by Paul Andersen to evaluate existing assessments and to create assessments of our own.

Elementary, Middle Level, High School, General Science

INTEGRATING GLOBAL CLIMATE CHANGE INTO THE NYSSLS THROUGH STORYLINE DEVELOPMENT

Alyssa De Pinto & Mary Petrano (Commack Schools)

The purpose of NYSSLS is to create a STEM-literate public, which is necessary to adequately understand humans' impact on the environment. Research shows that students perform better on old-style assessments when taught with NYSSLS-style teaching. To carry out NYSSLS standards with integrity, teachers K-12 need to work collaboratively to teach content using common language and skills. Through storyline development, the collective human impact on climate change can be taught in a way that is easy to understand and prompts critical thinking about solutions to slow warming.

Middle Level, High School, Life Sciences, Earth & Space Sciences

HOW TO USE PHENOMENA TO MAKE GAINS IN STUDENT INQUIRY

Michelle Cozza (STEMscopes)

Are you looking for a strategy to introduce an anchor phenomenon to your students? Join us as we model presenting an anchor phenomenon and creating a driving question board. This strategy will intrinsically motivate your students and improve their inquiry skills. Participants will be working in collaborative groups to identify anchoring, investigative, and everyday phenomena.

Elementary, Middle Level, High School, General Science

THE FUTURE OF LEARNING: TOMORROW AND BEYOND

Robert Corbin (Discovery Education)

As much as the field of education has been ever-changing, in many ways it has still remained the same. Will the concepts of today's education be enough to prepare students? WIth more high stakes demands being placed on educators each day, it is essential that we think beyond the classroom. WIth the digital age upon us, there are more opportunities than ever to provide students what is needed to be active, thriving learners and look beyond simply engaging our students. This interactive session will unpack the opportunities that exist and how to plan for the learning of tomorrow.

Elementary, Middle Level, High School, Technology

SESSION TWO WORKSHOPS

INNOVATING FOR GOOD: DEVELOPING LIFELONG PROBLEM SOLVERS

Michael Soskil (Keynote Speaker)

Our students are facing a complex work full of ethical and societal challenges. We must teach them to to both identify and solve the unique and unforeseen problems in their future. In this session, we will explore ways teachers and schools can develop socially conscious problem solvers that prepare for both future careers and a bright future in a global, technological world.

Elementary, Middle Level, High School, General Science

A NEW APPROACH TO AFTER-SCHOOL STEM

Ellen Furuya & Lois Miceli (Hofstra University Center for STEM Research)

STEMgineering Academy is an easy to implement, high-impact STEM program designed for out-of-school-time programs. Middle School aged kids (grades 5 through 8) work in teams or parents work with younger elementary students to complete fun, hands-on activities where kids learn through designing, building and evaluating. A different STEM concept and career is explored in each 75-minute activity.

Elementary, Middle Level, Integrated STEM

A BASIC APPROACH TO A NYSSLS ACID-BASE UNIT

Stephanie O'Brien (Commack HS), Jessica Mintz (Bay Shore HS), & Michael Shanzer (Bay Shore HS)

This workshop will provide an overview of a NYSSLS aligned and piloted acid base unit. Participants will have the opportunity to follow and participate in an acid base story-line for the purpose of immediate implementation.

High School, Chemistry

SOMETHING LIKE A PHENOMENON: NYSSLS FOR NEWCOMERS

Carol-Ann Winans (Wantagh Schools)

In this turn-key presentation, teachers will participate in a student activity that will allow for the exploration of an authentic phenomenon, apply cross-cutting concepts, and science and engineering practices to meet a selected NYSSLS performance expectation.

Middle Level, High School, Life Sciences

NYSSLS ELEMENTARY STORYLINE CREATION THROUGH MYSTERIES

Emily Kang (Adelphi University) & Alison Offerman-Celentano (Commack Schools)

Who can resist a good mystery? Participants will learn to incorporate a mystery into their elementary science units to foster students' sense of wonder and curiosity about what they are learning. These mysteries will form the basis for coherent storylines for elementary units aligned to the NYS Science Learning Standards. Samples unit storylines will be shared.

Elementary, General Science

CLAIM, EVIDENCE, AND REASONING: SCIENTIFIC EXPLANATIONS TO INCREASE STUDENT VOICE

Michele Cozza (STEMscopes)

The claim, evidence, and reasoning (CER) protocol is a way for students to explain observed phenomenon in a scientific way. This structured approach allows students to use observations and data from an investigation. Students use critical reasoning to connect the claim and evidence together. CER is an acclaimed and highly successful instructional strategy that is changing how students understand concepts and write explanations for phenomena.

Elementary, Middle Level, High School, General Science

INTEGRATING ENGINEERING INTO YOUR PHYSICS/PHYSICAL SCIENCE CURRICULA

Josh Hubbad (Inter City Baptist School) & Gary Curts (Activate Learning)

Experience and share in the wealth of two teachers about their successful implementation of engineering in their physics and physical science classes. Learn strategies about showing the relevancy and close connection of science and engineering. This workshop will have lots of pertinent handouts for you to take home and generate ideas that you can seamlessly integrate into your existing curricula and classroom. We will be using the NGSS-friendly and student-centered approach of the internationally acclaimed Active Physics curricula.

High School, Physics

SESSION THREE WORKSHOPS

EXPLORING NATURE-THEMED STORYLINES WITHIN THE MIDDLE SCHOOL CLASSROOM

AnnMarie Mills (Islip Middle School)

Take a walking tour through a Life Science Curriculum designed using a storyline approach with an emphasis on place-based, environmental issues. These standards based lessons provide students with purposeful learning as they unlock the mysteries of Fish Kills, illegal soaps and Horseshoe Crabs. Students take part in civic engagement when they role play as local politicians to debate and, ultimately vote on solutions for environmental issues. The lessons shared in the workshop also provide opportunities for outdoor education and exploration whenever possible.

Middle Level, Life Sciences

UNPACK 3-DIMENSIONAL STANDARDS WITH PHENOMENAL SCIENCE INSTRUCTION

Tom Gantt (Amplify Education)

Teachers will learn how phenomena-based science instruction designed around real-world problem solving can incorporate all aspects of the New York State Science Learning Standards. Teachers will unravel the Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts in how they relate to science curriculum design. This session will engage educators with hands-on activities, digital tools, active reading, and dynamic discussion with the purpose to design instruction with 3-Dimensional Statements.

Elementary, Middle Level, Integrated STEM

IMPROVE STUDENT ACHIEVEMENT THROUGH STEM TEACHER ACTIONS

Michele Cozza (STEMscopes)

Earning a STEM Teacher Certificate will refine and demonstrate your understanding of 15 STEM Teacher Actions. These effective, engaging, and evidence-based STEM instructional strategies will transform your students' outcomes and energize your campus.

Elementary, Middle Level, High School, Integrated STEM

NGSS ASSESSMENTS FOR REGENTS COURSES: HOW TO LEAD AND DEVELOP A WORKFLOW PROCESS IN YOUR SCHOOL

Tobias Hattan & Elizabeth Leone (Great Neck Public Schools)

This workshop will demonstrate a repeatable and manageable workflow process that allows coordinators and coaches to developing NGSS-aligned 3-D assessments with their instructional teams in Regents Level courses. Participants will evaluate assessments and learn how to institute a 30 minute creation process that lets educators develop assessments that reflect the shift in pedagogical approaches within the NGSS. Participants will leave with a digital toolbox to replicate the process with their teachers.

Middle Level, High School, General Science

PRODUCTIVE STRUGGLE AND THE BRAIN SCIENCE BEHIND MATH & SCIENCE LEARNING

Nancy Lin (Nassau BOCES)

What is productive struggle and why is it so critically important for deep learning? Learn the neuroscience behind learning and how teachers can use this knowledge to foster deeper learning in math and science.

Elementary, Middle Level, High School, General Science

TEACHING SCIENCE IN A 1:1 ENVIRONMENT

Colin Jones, Stephen Hassard, & Jennifer Fitzpatrick (Plainview-Old Bethpage Schools)

This workshop will provide the participants with practical ideas to take forward for 1:1 learning initiatives where one device is provided for each student. The workshop is aimed both at teachers who are already using 1:1 devices in their classrooms and teachers who are interested to start. The workshop will explore 1:1 teaching through lesson plans, inspiring examples, practical tips, and the exchange of experiences

Middle Level, High School, General Science, Technology

A SYSTEMS APPROACH TO EARTH SCIENCE

Josh Hubbard (Inter City Baptist School) & Gary Curts (Activate Learning)

Learning about teaching all the different concepts of Earth Science through a “systems” approach. We will be doing an activity that spotlights the importance of understanding the explicit and sometimes subtle relationship between all of the Earth’s systems. This workshop also will highlight the importance of having students understand the intricacies of positive and negative feedback loops, which is essential in the NGSS. Handouts and plenty of ideas to help expedite the metamorphosis of your class into one that is centered and aligned with the new NYS Science Learning Standards.

High School. Earth Science