

# New Jersey Science Convention Virtual 2020 Program

Posted 10/28/2020

## October 17, 2020—Saturday

1:00-2:00 PM

### **20. Supporting Students' Science Learning at Home During COVID-19**

Remote learning provides opportunities to connect the science we teach to students' everyday lives. Join us and three of our NGSS Teacher Leaders who will share how they have engaged elementary, middle, and high school students in NGSS-aligned investigations while learning at home. Receive further guidance and resources to support students and their families as they learn at home.

*Presenter: Wil van der Veen, RVCC Science Education Institute*

*Co-Presenters: Tina Gandarillas, Jane Kirshenbaum, Justin, Perionotti, Lauren Massa*

*Moderator: Stacey van der Veen*Grades:

K-12 | Topic Areas: Integrated/General, Science Leaders/Supervision

2:15-3:15 PM

### **5. Bring on the Data! Beginning Strategies to Integrate Data & Science Literacy in Classroom and Beyond**

Data are fundamental for 3D teaching and success in the 21st century. Leverage how people learn to teach data skills alongside our content with these beginning strategies to build students data and science literacy.

*Presenter: Kristin Hunter-Thomson, Dataspire Education & Evaluation LLC*

Grades: 5-12 | Topic Areas: Stem/Steam, Integrated/General

3:30-4:30 PM

### **15. Promoting Equity in Science Education**

Participants will explore concrete evidence-based strategies that lead to ALL students having opportunities to engage meaningfully in science learning.

*Presenter: Michael Heinz, State Science Coordinator, NJDOE*

*Moderator: Scott Goldthorp*

Grades: K-12 | Topic Areas: Equity and Access to Science, Science Leaders/Supervision

## October 18, 2020—Sunday

11:30 AM-12:30 PM

### **33. Make Biology Visible with BioBits Cell-Free Experiments**

The BioBits cell-free system creates proteins without cell culture and can be activated by simply adding water. Learn how to use BioBits to make complex biology concepts like the central dogma real for students.

*Presenter: Ally Huang, miniPCR bio*

*Moderator: Sebastian Kraves, miniPCR bio*

Grades: 6-12 | Topic Areas: Biology/Life Science, Stem/Steam

1:00-2:00 PM

**11. Explore and Create Video Case Studies with HHMI BioInteractive Resources**

Students like videos and they like stories. Learn to use and create a video case study to engage your students either virtually or in person using free HHMI BioInteractive Resources.

*Presenter: Karen Lucci, Hopewell Valley Central High School*

Grades: 7-12 | Topic Areas: Biology, Environmental Science

2:15-3:15 PM

**3. Virtual STEM Programs at Liberty Science Center**

Join us to discover the many K-12 STEM Programs that Liberty Science Center offers via a virtual learning environment/platform. Participants will experience samples from both our student and teacher professional development programs. We have programs that focus on Life Science, Physical Science, Earth and Space Sciences, as well as the Engineering Practices.

*Presenter: Anthony Bisulca, Liberty Science Center*

Grades: preK-12 | Topic Areas: Stem/Steam, Technolog

3:30-4:30 PM

**27. Teaching Science through Issues to Increase Engagement, Prepare Citizens, and Meet the NGSS**

Explore how teaching science through current societal issues increases student interest in science, creates citizens to address these issues, and meets the NGSS. Leave with an issue and planning tool for your class.

*Presenter: Christopher Murphy, The College of New Jersey, Robbinsville High School*

Grades: 6-12 | Topic Areas: Equity and Access to Science, Integrated/General

**November 12, 2020—Thursday**

4:30-5:30 PM

ANNUAL BANQUET SPEAKER

**Human Exploration: It's Not a Book of Knowledge...It's a Journey**

Every parent remembers that magical time when our children first began to speak, that moment marking the beginning of an unending stream of questions. In our children we can see our humanity—our innate curiosity—and recognize the obvious...that we are born to explore!

*Presenter: Jeff Goldstein, Director for the National Center for Earth and Space Science Education*

**November 14, 2020—Saturday**

11:30 AM-12:30 PM

**6. Bring on the Data! Intermediate Strategies to Foster Mastery of Data Literacy in Science and Beyond**

Data are key to 3D teaching and 21st century success. Let's leverage statistical concepts and how people learn to bring our content to new levels with intermediate strategies to integrate data into our classroom.

*Presenter: Kristin Hunter-Thomson, Dataspire Education & Evaluation LLC*

Grades: 8-12 | Topic Areas: Stem/Steam, Integrated/General

1:00-2:00 PM

**19. Connecting Everyday Phenomena to the Science Ideas We Teach**

The goal of science instruction is support students as they make sense of the natural world in which they live. Join us and learn how to support students in connecting science phenomena that can be found around their homes to the science ideas we teach.

*Presenter: Wil van der Veen, RVCC Science Education Institute*

*Moderator: Stacey van der Veen*

Grades: K-12 | Topic Areas: Integrated/General, Science Leaders/Supervision

2:15-3:15 PM

**21. Using Your Instructional Materials to Support NGSS-aligned Instruction and Assessment in Person or Online**

Frustrated with instructional materials that don't support 3-dimensional instruction? Learn from teachers who modified their resources to make them more NGSS-aligned – and easier to teach both face-to-face and online

*Presenter: Stacey van der Veen, Leadership in Science, LLC*

*Moderator: Wil van der Veen*

Grades: K-12 | Topic Areas: Integrated/General, Science Leaders/Supervision

3:30-4:30 PM

**12. Climate Change: Ensuring a Curricular Fit!**

Climate change permeates our state standards. Need teaching resources? Come learn about CLEAN (Climate Literacy & Energy Awareness Network), your go-to place for all your climate education needs.

*Presenter: Missy Holzer, NJESTA*

Grades: 6-12 | Topic Areas: Earth/Space Science, Environmental Science

**November 15, 2020--Sunday**

11:30 AM-12:30 PM

**7. NASA's Infinscope Online Interactive Teaching Resources**

The Infinscope Digital Teaching Network hosts and distributes authentic, NGSS-aligned, digital, STEM learning experiences built with NASA data in which learners are supported through intelligent tutoring. The intelligent tutoring in Infinscope experiences promotes equity in achievement through meaningful feedback to each learner, targeted to his or her responses.

*Presenter: Christine Girtain, Toms River Schools*

Grades: 6-9 | Topic Areas: Earth/Space Science, Integrated/General

1:00-2:00 PM

**4. Leveraging Existing Assessment Resources to Support Tridimensional Learning**

We will use readily available interactive tasks as examples to share ways to modify tasks with different disciplinary targets for the purpose of three-dimensional science teaching and learning in classrooms.

*Presenter: Shu-Kang Chen, Educational Testing Service*

*Co-Presenter: Raymond De Hont*

Grades: 9-12 | Topic Areas: Integrated/General, Biology

2:15-3:15 PM

**26. People and the Biosphere: Hands-on Activities for Environmental Science**

Discover data-rich lessons to help your students explore human population, biodiversity, climate change, land and natural resource use, as well as paths to sustainability.

*Presenter: Pete Bailey*

*Co-Presenter: Judy Levine, Somerville High School*

Grades: 7-12 | Topic Areas: Environmental Science, Common Core

3:30-4:30 PM

**1. Creating Equitable Assessments**

3D learning includes content, practices and concepts. How do we make sure assessments are accessible to all students? How we assess, track and record our standards of achievement can change the focus of the class.

*Presenter: David Frangiosa, Pascack Hills High School*

*Co-Presenter: Elise Burns*

Grades: 6-12 | Topic Areas: Equity and Access to Science, Integrated/General

**January 9, 2021—Saturday**

11:30 AM-12:30 PM

**8. Setting Teachers & Students Up for Success to Analyze & Interpret Data, Integrating Data Literacy In K-12 Classes**

Data are key to 3D teaching and 21st century success. Let's explore how we can support our teachers across the district, and disciplines, as they facilitate students using real-world data to learn science content.

*Presenter: Kristin Hunter-Thomson, Dataspire Education & Evaluation LLC*

Grades: 3-12 | Topic Areas: Science Leaders/Supervision, Stem/Steam

1:00-2:00 PM

**2. A Practical Guide to Transforming Your Grading Practices**

We will show you how to develop a standards-based grading system that reflects your values as an educator, works within a traditional grading model, and is consistent with the NGSS.

*Presenter: David Frangiosa, Pascack Hills High School*

Grades: 6-12 | Topic Areas: Integrated/General, Equity and Access to Science

2:15-3:15 PM

**28. Using Physical Models of Proteins in Learning High School Biology**

Physical models of proteins such as 3D prints based on atomic coordinates from the Protein Data Bank or curated paper models can help learners understand the connection between protein structure and function and comprehend underlying chemical principles that lay behind the 3D structure.

*Presenter: Maria Voigt, RCSB Protein Data Bank*

Grades: 9-12 | Topic Areas: Biology, Stem/Steam

3:30-4:30 PM

### **9. Learning Progressions in Science: Implications for Teaching, Learning, and Assessments**

What guidance can learning progressions (LPs) offer about science learning and where students are along a learning continuum? We will present our LP research and discuss how teachers can use LPs in classroom.

*Presenter: Lei Liu, Educational Testing Service*

Grades: 5-9 | Topic Areas: Integrated/General, Biology

## **January 10, 2021—Sunday**

11:30 AM-12:30PM

### **31. Strategies for Digital Science Instruction**

Today's science classroom can be virtually anywhere. Students learn from home, the backyard or in a traditional school setting. Educational technology has made this process easier and more exciting. Join us for a look at some instructional strategies that incorporate media, apps and internet tools.

*Patti Duncan, Instructional Consultant*

Grades: K-12 | Topic Areas: Technology, Integrated/General

1:00-2:00 PM

### **10. Using NGSS-Aligned Assessments Across Science Disciplines: A Crosscutting Focus**

How can teachers use assessments that highlight NGSS Crosscutting Concepts? We'll share and analyze assessment tasks and examples of student work related to Crosscutting Concepts in Earth and Life Science Topics.

*Presenter: Dante Cisterna, Educational Testing Service*

Grades: 6-12 | Topic Areas: Biology, Earth/Space Science

2:15-3:15 PM

### **23. Using Digital Resources to Create the Ultimate K-2 Science Lesson**

Early Ed science shouldn't make you spin out of control! K-2 science can be very successful when taught with interactive, digital resources. See how a digital minute (or 5!) leads to a mastery of science concepts!

*Presenter: Jenna Mercury, ExploreLearning*

Grades: PreK-3 | Topic Areas: Integrated/General, Stem/Steam

3:30-4:30 PM

### **14. Facing Students' Climate Change Anxiety**

For students, the discussion of climate change can result in eco-anxiety. Join us as we explore how to identify and support students' emotional responses to learning about climate change.

*Presenter: Carrie Ferraro, Rutgers University*

Grades: 6-12 | Topic Areas: Equity and Access to Science, Earth/Space Science

## February 6, 2021—Saturday

11:30 AM-12:30 PM

### **32. A Cardio –Dance Party at the NJSC! Oh, and a Discussion about Exercise and Nutrition Too!**

Something different - dance with me for 45 min to Top 40 and Latin songs. Seriously! Then have a 45 min really interesting conversation about exercise and nutrition, with information and activities for the classroom.

*Presenter: Jeff Goldstein, Director for the National Center for Earth and Space Science Education*

Grades: 6-12 | Topic Areas: Biology/Life Science, Physics/Physical Science

1:00-2:00 PM

### **30. Let's Get REAL with STEM: Career-Readiness for High Schoolers**

We don't provide HS students with in-depth, practical, concepts and practices. Interactive STEM Cases will empower our students to jump into the role of a real STEM professional tasked to solve real-world problems.

*Presenter: Jenna Mercury, ExploreLearning*

Grades: 9-12 | Topic Areas: Biology, Environmental Science

2:15-3:15 PM

### **24. One Technology for ALL of STE(A)M**

Experience ONE technology that integrates ALL of STE(A)M. This session will leave you with plenty of ideas to use in your classroom right away. Free resources will be shared.

*Presenter: Robyn Poulsen, Texas Instruments*

Grades: 8-12 | Topic Areas: Stem/Steam, Technology

3:30-4:30 PM

### **29. Digital Escape Room**

Join me to escape the science lab and learn how to create a Digital Escape Room! In this session we will try to escape a science lab. We will also learn how to create a digital escape room within Google Suite.

*Presenter: Talissa Nahass, Rutherford High School*

Grades: 6-12 | Topic Areas: Technology, Biology

## February 7, 2021—Sunday

11:30 AM-12:30 PM

### **13. Stan-X: Unleashing a Passion for Research-Based Learning in Students and Teachers**

We will present the efforts of six secondary schools and lab-based partners at Stanford University to create relevant, impactful research-based learning curricula in the field of genetics, and how you can too!

*Presenter: Nicole Lantz, The Lawrenceville School*

Grades: 6-12 | Topic Areas: Stem/Steam, Biology

1:00-2:00 PM

**16. Talking Trash and Making Sense of Data**

Use real data to visualize the human impacts of pollution on our waterways. Learn ways to use this information to make graphing meaningful and fun.

*Presenter: Jessica Kohout, Reservoir High School*

Grades: 9-12 | Topic Areas: Environmental Science, Biology

2:15-3:15 PM

**17. Making Thinking Visible: Intro to SketchNotes**

The aim of SketchNoting is for individual students to make their thinking visible and create longer-lasting connections unique to their ways of thinking. During this session, participants will learn how to apply the SketchNote strategy to standards-based instruction and assessment.

*Presenter: Brittany John & Veronica Decamillis, Cumberland County Technical Education Center*

Grades: 6-12 | Topic Areas: Integrated/General, Equity and Access to Science

3:30-4:30 PM

**18. Applications of Satellite, Remote Sensing, and Computer Visualizations: To Observe the Earth and Visualize the Future**

Tasked with teaching earth and Space Science? Learn how you can apply satellite and remote sensing data in your classroom as a part of NASA's GLOBE Mission Earth. Join the GLOBE Satellites in Education Team.

*Presenter: John D. Moore, NJ GLOBE Program Partnership*

Grades: 1-12 | Topic Areas: Earth/Space Science, Stem/Steam