Summer Leadership Institute

San Diego 2016 – June 28-July 1

Marriott Mission Valley Hotel
Day 1: Tuesday, June 28, 2016

8:00-11:30 am  Exhibitor/Sponsor Setup – Foyer of Rio Vista Grand Ballrooms

10:00-5:00 pm  Registration Open – Foyer of Rio Vista Grand Ballrooms

11:30-7:00 pm  Exhibits Open for Viewing

1:00-1:30 pm  Welcome & Institute Overview by Keri Randolph, NSELA President, Rio Vista Grand Ballroom E

1:30-2:30 pm  General Session 1 – Kathy DiRanna, K-12 Alliance Director, WestEd

“Hope is a Good Thing!”

2:30-2:45 pm  Break, Networking, and Exhibit Visits, Foyer of Rio Vista Grand Ballroom

2:45-3:45 pm  General Session II – Chelsea Cochrane, San Diego County Office of Education

“Three Dimensional Learning”

3:45-4:45 pm  General Session III – Keri Randolph, NSELA President; and Larry Plank, NSELA

“Learning in the Three Dimensions”

4:45-5:00 pm  Closing and Daily Survey

6:00-7:30 pm  NSELA Reception – Gerald Solomon, Executive Director, Samueli Foundation – Rio Vista Grand Ballroom

“STEM Ecosystems” – Sponsored by VWR/Ward’s Science

7:30-9:00 pm  Dinner Tours – On Your Own (groups will be forming)

Day 2: Wednesday, June 29, 2016

7:00-8:00 am  Breakfast, Rio Vista Pavilion (outside)

7:30-4:30 pm  Exhibits Open – Foyer of Rio Vista Grand Ballroom

8:00-8:15 am  Welcome & Today’s Overview – Keri Randolph, NSELA President, Rio Vista Grand Ballroom E

8:15-10:00 am  General Session IV – Kendall Zoller, Sierra Training Associations, Inc., Rio Vista Grand Ballroom E

“Hacking Leadership”

10:00-10:20 am  Break, Networking, and Exhibit Visits, Foyer of Rio Vista Grand Ballrooms

10:20-11:45 am  General Session IV (Continued) – Kendall Zoller
11:45-1:00 pm  Lunch – Sponsored by Texas Instruments – Ron DeChristoforo, State Policy Director – Rio Vista Pavilion (outside)

Speaker – Arthur Beauchamp, Senior Director of Professional Learning Systems, School of Education, UC Davis

1:00-2:30 pm  Breakout Sessions A
A: “New Tools for Teaching About Waves” – Dr. Mark Koker, Director, LAB-AIDS Institute, Rio Vista Salon F

B: “Transitioning To 3-Dimensional Assessment: Using Hands-on Performance Tasks to Assess Mastery of Both the Science Practices and DCIs” – Dr. Deborah Tucker, Independent Science Education Consultant and Grant Gardner, President-CEO, Assessment Services, Inc., Rio Vista Salon G

C: “Ingredients of Productive Science Talk in the Classroom” – Jennifer Folsom, Lead Learning Architect, Making Sense of SCIENCE, WestEd; and Jennifer Mendenhall, Senior Communications Lead, Making Sense of SCIENCE, WestEd, Rio Vista Salon H

2:30-2:45 pm  Break, Networking, and Exhibit Visits, Foyer of Rio Vista Grand Ballroom

2:45-4:15 pm  Breakout Sessions B

A: “Performance-Based Certification for STEM Teachers and Campuses” – Dr. Terry Talley, Program Manager for the National Institute for STEM Education (NISE) for Campus and District Certification, Rio Vista Salon F


C: “Making Sense of Science: A System for Systems Thinking” – Jennifer Folsom, Lead Learning Architect, Making Sense of SCIENCE, WestEd; and Jennifer Mendenhall, Senior Communications Lead, Making Sense of SCIENCE, WestEd, Rio Vista Salon H

4:30-5:20 pm  General Session V – “Making Sense” with Kendall Zoller, Rio Vista Grand Ballroom

5:20-5:30 pm  Closing and Daily Survey – Keri Randolph, NSELA President

6:30-9:30 pm  Special Evening Event Sponsored by PASCO Scientific – USS Midway Museum

Complimentary for SLI participants. Tickets needed for additional reception attendees (spouses, partners, friends), - $25 each. Includes roundtrip hotel-museum transportation, admission to the museum, reception food, soft drinks, beer, and wine. PASCO VIPs include Steven Korte, CEO/President; Richard Briscoe, Director of Domestic Sales; and Sandy Brooks, Domestic Marketing Manager. NSELA greatly appreciates the generous support by PASCO!
Day 3: Thursday, June 30, 2016

7:00-8:00 am  Breakfast, Rio Vista Pavilion (outside)

7:30-3:30 pm  Exhibits Open – Foyer of Rio Vista Grand Ballroom

8:00-8:15 am  Welcome & Today’s Overview – Keri Randolph, NSELA President, Rio Vista Grand Ballroom E

8:15-9:45 am  Breakout Sessions C


C:  “Building a Bridge: 3-Dimensional Learning and Literacy” – Arthur Beauchamp, Senior Director of Professional Learning Systems, School of Education, UC Davis, Rio Vista Salon H

9:45-10:15 am  Break, Networking, and Exhibit Visits, Foyer of Rio Vista Grand Ballroom

Break Sponsored by Vernier Software & Technology

10:15-11:45 am  General Session VI – “UnConference” – Keri Randolph, NSELA President, Rio Vista Grand Ballroom E

11:45-1:00 pm  Lunch – Rio Vista Pavilion (outside)

1:00-2:30 pm  General Session VII – Jodi Peterson, Assistant Executive Director, NSTA, Rio Vista Grand Ballroom E

“Every Student Succeeds Act (ESSA) – Key Changes”

2:30-2:45 pm  Break, Networking, and Exhibit Visits, Foyer of Rio Vista Grand Ballroom

2:45-4:00 pm  General Session VIII: Closing and Final Thoughts – Setting the Stage for 2016/2017, Group/Team Planning, Rio Vista Grand Ballroom E

Day 4: Friday, July 1, 2016 – Field Trip Day (Optional)

San Diego Zoo  Optional, 9:45 am – 3:00 pm, plus open time until 9:00 pm. Behind the Scenes guided tour for educators to include a zoo bus tour and two animal interactions with wildlife biologists. $25 per person, transportation on your own. Maximum of 40 people. Tickets available at http://nsela.org/sli/521-2016-sli-events. Also stay for the weekend for additional attractions in San Diego
Welcome to the 2016 NSELA Summer Leadership Institute: Leadership in a Sea of Change!

On behalf of the National Science Education Leadership Association (NSELA), I want to welcome you to sunny San Diego and the 2016 NSELA Summer Leadership Institute (SLI). With so many changes in science education, we have focused the SLI on navigating and supporting change, as well as providing the opportunity for us to collaborate, learn and support one another in this time of change.

We are excited to welcome a fantastic slate of speakers and facilitators. Kathy DiRanna will share experiences and lessons learned in implementing the science and engineering practices and the NGSS. Kendall Zoller will help us think about hacking leadership in order to support a culture of creativity and innovation for change. Jodi Peterson will share everything we need to know about changes coming in the Every Student Succeeds Act. The slate of breakout sessions was carefully chosen to inform and guide our thinking as leaders in a changing environment, as well as give us the opportunity to connect and collaborate. I hope you will take advantage of all the SLI has to offer including the receptions, field trips and fun!

Let’s ride the waves of change together this week! NSELA is committed to supporting science leaders like you, and the connections we establish this week will continue to help us as we learn and lead in a sea of change.

Keri Randolph
NSELA President, 2016-17
Kathy DiRanna – WestEd, K-12 Alliance Director

“Hope is a Good Thing!”

We know leadership is about shared vision and action, but how do you build the energy of collaboration? Learn how the CA NGSS K-8 Early Implementation Initiative is working with 8 districts and 2 charter organizations to implement NGSS K-5 as a core subject in elementary school, and grades 6-8 as an integrated model. Hear real stories about the successes and challenges of implementation that incorporate research, data, evidence—and a thing called hope—to make a difference in science education for all students.

Kendall Zoller – Sierra Training Associates, Inc.

“Hacking Leadership – Innovations for Change”

Hacking Leadership is a model for creating a culture of creativity and innovation in a sea of change and uncertainty. The issues we face today will be solved by answers we do not yet have. This session explores ways of creating a culture where communication is the foundation for creativity and innovation by looking at credibility, rapport, how to listen and respond as well as how to recover with grace.

Great teaching catalyzes great learning in our students. Our leadership must engage our peers in new ways of thinking to create new solutions to the nagging and persistent adaptive issues we face.

Jodi Peterson – National Science Teachers Association, Associate Executive Director

“Every Student Succeeds Act (ESSA) – Key Changes”

“No Child Left Behind” is gone and the new federal education legislation—the “Every Student Succeeds Act” or ESSA—is coming, and soon. District leaders and teachers will need to know how, and if, ESSA will change the way science and STEM is taught in your school or district.

During the SLI, we will examine the new law with a focus on science/STEM education and teachers. Learn about the key changes from NCLB, get answers to your questions, and find out where (and how) you can find and access federal dollars for science and STEM programs. Classroom science teachers, district and school science leaders, administrators, and other science education stakeholders are encouraged to attend.

BREAKOUT SESSIONS

Jennifer Folsom, WestEd, Lead Learning Architect, Making Sense of SCIENCE
Jennifer Mendenhall, WestEd, Senior Communication Lead, Making Sense of SCIENCE

“Ingredients of Productive Science Talk in the Classroom”

During this session, participants will engage in discourse by using and analyzing data, listening to each other, questioning one another, and refining scientific vocabulary through discussion. They will also view classroom videos and identify strategies that support productive scientific discourse. The group will reflect on Lemke’s four languages of science — words, symbols, actions, and images — and discuss how these languages help students bridge the connection between science and literacy. Participants will walk away with techniques for supporting productive scientific discourse in the classroom.
Dr. Deborah Tucker, Independent Science Education Consultant, Napa, CA
Grant Gardner, Assessment Services, Inc., President-CEO

“Transitioning to 3-Dimensional Assessment: Using Hands-on Performance Tasks to Assess Mastery of Both the Science Practices and DCIs”

As a leader in science education, we are often charged with facilitating improvement in teacher pedagogical content knowledge (PCK). This session provides PCK strategies for developing formative assessment tools and processes. And for leaders, this session provides resources and rationale to use as you introduce these changes in assessment called for by the NRC Framework, the NRC Developing Assessments for the Next Generation Science Standards, and the NGSS. Session participants will engage in a hands-on performance task, consider the formative assessment implications of this type of assessment, and reflect on their use of hands-on performance assessment in their own learning environment.

Chelsea Cochrane, San Diego County Office of Education, Science Project Specialist
John Spiegel, San Diego County Office of Education, Science Coordinator

“Navigating the NGSS Change Process: Understanding the How, What, and Why”

Change is difficult. It requires significant shifts in thinking as we seek to understand what is changing and how we are supposed to implement those changes. Change is also deeply emotional. It asks us to rethink the fundamental purposes and rationale for what we do, how we do it, and also why we do it. Educators respond to these changes with a variety of emotions which must be considered as part of the NGSS implementation process. Implementing a new system-wide change effort, such as the NGSS, requires tremendous assistance and encouragement. Learn how effective strategies can support the change effort. Understand the emotions that prevent positive change.

Jennifer Folsom, WestEd, Lead Learning Architect, Making Sense of SCIENCE
Jennifer Mendenhall, WestEd, Senior Communication Lead, Making Sense of SCIENCE

“Making Sense of Science: A System for Systems Thinking”

Develop an understanding of the NGSS cross-cutting concept of systems and system models. Using organisms as an example, participants will collaboratively explore a variety of biological systems and environments, to identify their boundaries, components, inputs/outputs of matter and energy, and interactions that take place within the system and across systems. Included are five principles of systems thinking: (1) Look for the bigger picture; (2) Study systems from multiple perspectives; (3) Consider the role of short and long time frames; (4) Search for complex, circular cause and effect relationships (not just simple ones); and, (5) Explore places where systems connect with other systems.

Christy Compton Hall, San Diego Unified School District, NGSS Project Director, Science Resource Teacher

“Using Phenomenon as a Tool for Instruction in the Integrated Middle School Model”

Phenomenon-based learning engages students with real-world science as a starting point for developing understanding. Participants in this session will experience a process for brainstorming an integrated Phenomenon Cluster Map, creating unit storylines, and developing three-dimensional Conceptual Flows. Phenomena use allows educators to construct coherent and integrated NGSS units for 6-8th grade classrooms. These types of 3D units provide equitable access to science content for all students.

Arthur Beauchamp, University of California – Davis, Senior Director of Professional Learning Services

“Building a Bridge: 3-Dimensional Learning and Literacy”

Investigate light while engaging in 3-dimensional learning and literacy simultaneously. Develop a model of light while we experience a framework to stimulate reasoning, promote dialogue, include reading, and require meaningful writing.
SPONSORED SESSIONS

Accelerate Learning – Dr. Terry Talley, Program Manager for the National Institute for STEM Education (NISE) for Campus and District Certification

“Performance-Based Certification for STEM Teachers and Campuses”

A classroom with an effective teacher is associated with growth in student learning at a rate that is three times greater than that in a classroom with a low-performing teacher,” according to researchers Frontier & Rickabaugh (2014). How is an effective teacher identified and what are the varying degrees of effectiveness? In the STEM classroom an effective teacher selects actions, which impact student achievement. This session provides an observation tool for teachers to self-assess and coaches to calibrate levels of proficiency in the 16 observable actions that are essential for student achievement in STEM; including the best practices for teaching and learning in the 3 Dimensions. Submission of an online portfolio of these actions gains for teachers the National Certificate for STEM Teaching through the National Institute for STEM Education and for campuses/districts the National Certificate for STEM Excellence.

ExploreLearning – Pam Larson, M.Ed., Senior Regional Manager, Professional Development

“Computer-Based Assessments Made Easy”

With widespread implementation of interactive computer-based tests, the assessment landscape is rapidly changing. How prepared are you and your students to move beyond multiple-choice questions to those that assess student scientific understanding and thinking?

It is important for students to experience the types of test items that are possible with computer-based platforms but which may not be possible with paper-based assessments. In order to be successful on technology based assessments, instruction must prepare students for an assessment world which includes more complex and constructed assessment items that relate to real life scenarios. Students will need to be able to make strategic decisions about variables and to conduct investigations which include multiple variables. They’ll also need to learn how to provide evidence with data collected from experimentation, and to construct explanations for their results. ExploreLearning Gizmos are interactive, virtual simulations designed to support just that kind of instruction. Participants will experience the types of student tools that are available through Gizmos, which are a component of answering a computer-based assessment correctly and completely.

LAB-AIDS – Dr. Mark Koker, Director, LAB-AIDS Institute

“New Tools for Teaching About Waves”

Although they spend much (too much?) of their time in front of screens, most middle school students have little understanding about how they work. Join us to explore some new hands-on tools for teaching content dealing with waves as carriers of information and energy. This new NGSS unit from SEPUP uses a personal health issue context -- protection from the exposure to dangerous levels of sound and light energy -- to understand the basics of wave behavior and transmission. How does light interact with matter? Does sound reflect the way that light does? Do all colors of light contain the same energy? Join us for a hands-on look at these topics and more.

Mark Your Calendars - 2017 Summer Leadership Institute

Omaha Nebraska - June 28-30, 2017 – Henry Doorly Zoo and Aquarium
MARRIOTT
MISSION VALLEY HOTEL – SAN DIEGO
8757 Rio San Diego Drive
San Diego, CA  92108
Phone (619) 692-3800

Registration and Exhibits  Foyer, Rio Vista Ballroom
General Sessions      Rio Vista Ballroom, Salon E
Breakout Sessions    -- Rio Vista Ballrooms (broken up – E, F, G, H)
                      -- Breakfast/Lunch – Rio Vista Pavilion (outside)

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NSEA 2016 SLI – San Diego | 062116 | Page 8 of 11
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**Professional Learning Opportunities for Science Leaders – 2016-2017**

- **Oct. 28, 2016**
  - Minneapolis, Minnesota
  - NSTA Area Conference
  - Convention Center
  - “Tools for Science Leaders” Parts 1 & 2

- **Nov. 11, 2016**
  - Portland, Oregon
  - NSTA Area Conference
  - Convention Center
  - “Tools for Science Leaders” Parts 1 & 2

- **Dec. 2, 2016**
  - Columbus, Ohio
  - NSTA Area Conference
  - Convention Center
  - “Tools for Science Leaders” Parts 1 & 2

- **Mar. 29, 2017**
  - Los Angeles, California
  - NSTA National Conference
  - Leadership Institute

- **Mar. 30, 2017**
  - Los Angeles, California
  - NSTA National Conference
  - Annual Membership Meeting

- **Mar. 31-April 1, 2017**
  - Los Angeles, California
  - NSTA National Conference
  - “Tools for Science Leaders” Sessions & Additional 8 Sessions

- **June 28-30, 2017 – Summer Leadership Institute**
  - Omaha, Nebraska
  - Omaha’s Henry Doorly Zoo & Aquarium

- **Tools for Science Leaders**
  - Parts 1 & 2

- **Additional 8 Sessions**

- **www.NSELA.org**