

# Pre-Conference Institute Session Schedule

## MSTA State Science Conference

### Thursday March 1, 2018

### Radisson Hotel, Lansing, MI

#### Make NGSS Lessons Phenomenal

**9:00 AM to 12:00 PM**

**Presenters:** Jim Clark & Samantha Johnson, California state trainers for NGSS

*Summary:*

In this three-hour session, participants will engage in a variety of phenomena that can drive both lessons of instruction and units. We will explore what the NGSS means by phenomena-based instruction, then connect sample phenomena to the science and engineering practices and crosscutting concepts. Participants will spend time developing rigorous phenomena for their current curriculum using a phenomenon evaluation tool and some existing phenomena banks.

For more information: Next Gen Science Innovations (<https://nextgenscienceinnovations.wordpress.com>)

#### Writing an NGSS Storyline

**1:00 PM to 4:00 PM**

**Presenters:** Jim Clark & Samantha Johnson, California state trainers for NGSS

*Summary:*

In this three-hour session, participants will learn how to design an NGSS instructional storyline. In the NGSS, a storyline is built around student questions, and driven by phenomena and science and engineering practices. Participants will work through a storyline as “students” and then will be given time and resources to write their own storyline for a sequence of lessons they are planning. This workshop pairs well with the morning workshop, Make NGSS Lessons Phenomenal, as participants will have already spent time working with and developing phenomena for their relevant content.

For more information: Next Gen Science Innovations (<https://nextgenscienceinnovations.wordpress.com>)

#### Assessing 3D Learning using Multiple Literacies in Project-Based- Learning (Lucas Project Workshop)

**9:00 AM to 12:00 PM**

**Presenters:** Joe Krajcik, Deborah Peek Brown, Susan Codere, Sam Severance, Kellie Finnie (CREATE for STEM)

*Summary:*

In this workshop teachers will explore project-based science units for Grades 3-5. In addition to experiencing the power of 3-Dimensional

learning in Project-Based- Learning lessons, they’ll learn about innovations in 3- Dimensional Assessment (formative and summative), and leave with tools they can use now. The Multiple Literacies in Project-Based- Learning resources will be posted as Open Education Resources in 2018.

#### Supporting Students in Figuring Things Out Using Multiple Literacies in Project-Based- Learning Resources Modeling

**1:00 PM to 4:00 PM**

**Presenters:** Joe Krajcik, Deborah Peek-Brown, Susan Codere, Sam Severance, Kellie Finnie CREATE for STEM

*Summary:*

In this workshop, participants will experience modeling activities from integrated project-based science units that address life and physical science performance expectations for Grades 3 and 4. We will explore strategies for supporting students in constructing models as we compare samples of student work within and across units. Participants will discover ways to leverage features of Project-Based- Learning and integrate modeling practices into elementary science instruction while incorporating literacy and mathematics standards. The workshop will foster collaboration, discourse, and agency in students. It will focus on units not yet promoted at MSTa State Science conference.

#### Administrator Training for Michigan Science Standards

**9:00 AM to 12:00 PM**

**Presenter:** Mike Klein

*Summary:*

The New Michigan Science Standards demand significant changes in the way we teach science. To be effective, school administrators will need to understand, communicate and support the new vision for science instruction outlined by the Framework for K-12 Science Education and the Next Generation Science Standards. Come join us as we explore the new standards and identify ways for administrators to support classroom teachers in realizing this new and exciting vision for science education.

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## Phenomenal Unit Planning

**9:00 AM to 12:00 PM**

**Presenters: Kristy Butler & Patti Richardson - Forest Hills Schools District**

*Summary:*

Explore designing biology storyline unit planning and student reflection. The Phenomenal Unit Planning workshop will take you through the process of using a phenomenon and building a storyline through student driven interest and inquiry. Participants will learn how to build a cohesive storyline using an anchoring phenomenon. The method can be applied to all content areas 6-12.

## Formative Assessment of Next Generation Science Standard (NGSS)

**8:00 AM - 4:00 PM**

**Presenters: Bill Penuel and Phil Bell**

*Summary:*

This opportunity to learn from Bill Penuel and Phil Bell is part of the Michigan Mathematics and Science Centers Network TESLA Initiative, funded by a grant from MDE. TESLA is focused on supporting the development of knowledge for science and math instruction and the development of leadership in math and science.

Join other Michigan educators as we learn about formative assessment with two nationally known experts, Phil Bell (Univ. of Washington) and

Bill Penuel (Univ. of Colorado-Boulder). Participants will explore the research behind formative assessment, evaluate various formative assessment prompts and methods, explore and evaluate student work, and create plans for bringing additional information about formative assessment in math and science back to your classroom.

## Michigan Environmental Education Curriculum Support (MEECS) Climate Change: Science & Impacts

**1:00 PM to 5:00 PM**

**Presenters: Janet Vail and Amanda Syers**

*Summary:*

Climate Change: Science and Impacts is the newest unit in the Michigan Department of Environmental Quality MEECS Project. The unit was developed with funding from the United States Environmental Protection Agency through the Great Lakes Restoration Initiative. The goal of the Climate Change Unit is to expand the MEECS project to bring issues associated with climate change and Great Lakes sustainability to Michigan teachers and students. The unit is science-based, Michigan-specific and tries to help students develop an information-based assessment schema of a complex issue. MEECS units provide students with the understanding they need to make decisions- not to tell them which decisions to make. Materials include a binder of unit materials, a classroom kit, and MEECS online content access.