



UNI Science Education Update Conference*

Friday, April 5, 2019

AGENDA

| <u>Time</u> | <u>Session Title/Description</u> | <u>Location</u> |
|-------------|--|------------------|
| 8:45 AM | Check In & Continental Breakfast | Commons Ballroom |
| 9:00 AM | Welcome & Introductions John Fritch, Dean of College of Humanities, Arts & Sciences Larry Escalada, Director of Science Education | Commons Ballroom |
| 9:05 AM | Key Note Presentation Ashley Flatebo – 2018 Presidential Award Recipient for Math and Science Teaching | Commons Ballroom |
| 10:00 AM | Morning Extended Sessions – See Sessions – Pick One | Locations Vary |
| 11:30 AM | Lunch/Informal Networking Welcome Mark Nook, President of UNI | Commons Ballroom |
| | UNI Financial Aid & Scholarships Tim Bakula, UNI Director of Financial Aid & Scholarships | |
| | Exhibits: Iowa Conservation Education Coalition, UNI Center for Energy and Environmental Education, Green Iowa AmeriCorps, Sustainable Schools, Iowa Agriculture Literacy Foundation, Iowa Lakeside Laboratory and Regents Resource Center, Northeast Iowa Regional STEM Hub, UNI Science Education, UNI College of Humanities, Arts, & Sciences (CHAS), UNI Tallgrass Prairie Center, UNI Iowa Academy of Science, and UNI Physics | |
| 1:00 PM | Afternoon Session #1– See Sessions – Pick One | Locations Vary |
| 2:00 PM | Afternoon Session #2– See Sessions – Pick One | Locations Vary |
| 3:00 PM | End of Conference Refreshments, Evaluations, Door Prizes, & Farewells! | Commons Ballroom |

*2019 UNI Science Education Update Conference funded by a UNI Foundation Grant provided by Warren Bromann and support from the UNI College of Humanities, Arts & Sciences

Key Note Presentation: 9:05 am to 9:50 am

Empowering Students Through Science Commons Ballroom

Ashley Flatebo, 2018 Presidential Award Recipient for Math and Science Teaching, UNI Alumnus, Instructional Technology Consultant for Central Rivers Area Educational Agency

Gaining strategies to engage students in STEM through experiences that will transfer beyond the classroom walls.

Sessions

Morning Sessions #1: 10 am to 11:20 am

Using Science Olympiad Events in Your Classroom

McCollum Science Hall 25

Jill Maroo, Assistant Professor of Biology and Science Education

An overview of Science Olympiad in Iowa. And a detailed discussion of how Science Olympiad events are aligned with NGSS and can be used in your classroom to engage students in learning. We will play some mini games followed by a Q&A.

Chemical Bonding and "Rainworks" Sidewalk Art

McCollum Science Hall 270

Holly Garcia, Riverside Chemistry & Physical Science Teacher

During this interactive session, immerse yourself in an NGSS-aligned Chemistry unit about chemical bonds and forces (HS PS 1-1 & 1-3). This phenomenon-driven unit culminates in a final STEAM project for students to design, explain, and apply Rainworks art onto concrete.

Argumentation in the FOSS classroom

McCollum Science Hall 112

Jennifer Slavick, FOSS Regional Lead Consultant PA, NY, NH, VT, CT, ME

Building NGSS argumentation skills in students. Experience a hands-on FOSS lesson and engage in argumentation from evidence. Learn strategies for argumentation in the classroom that help students support or refute claims for explanations and meet the rigorous NGSS expectations.

The Outside "Lab" - Keeping Investigations and Data Real

McCollum Science Hall 118

Barb Gigar and Linette Bernard, Iowa Conservation Education Coalition

During this session, you will use real-world data in the classroom and related investigations for students. Participants will need laptops or tablets to access data, but this is more than an exercise in manipulating a spreadsheet. Learn how to make science relevant through authentic observations and investigations regardless of your grade level. You will also get a glimpse of some of the new Project WILD field investigations.

The Science of a GMO

Rod Library-ScholarSpace Room 301

Will Fett & Cindy Hall, Iowa Agriculture Literacy Foundation

But the seeds look the same! Compare conventional and genetically modified soybeans through an easy-to-replicate GM seed test lab. This session will also compare and contrast various methods of selective breeding and discuss the process of creating a genetically modified plant.

Afternoon Sessions #1: 1:00 – 1:50 pm

Phenomena as a starting point in the FOSS classroom McCollum Science Hall 112

Jennifer Slavick, FOSS Regional Lead Consultant PA, NY, NH, VT, CT, ME

Experience phenomenon-based instruction through FOSS science materials and how they help students deepen their understanding over time. Plan to leverage phenomena to increase access and equity with your individual student population while engaging students in the 3-Dimensions of NGSS instruction.

Inclusive Curriculum: Making STEM Accessible for ALL Students Greenhouse 35

Mark Busch, Director of Education, Iowa Safe Schools'

Historically, women and people from marginalized community groups have accounted for a small portion of those pursuing STEM careers. In this session, participants will reflect on their current curriculum and consider new practices for making STEM coursework accessible to at-risk students and other students from underrepresented populations. This will be a conversation-based session where participants will share about their experiences and reflect on their classrooms.

Journey 2050 McCollum Science Hall 118

Cindy Hall & Will Fett, Iowa Agriculture Literacy Foundation

Journey 2050 takes students on a virtual simulation that explores the science and economics of world food sustainability. Through an inquiry-based approach, students make decisions on farms in Kenya, India, and Canada that impact society, the environment and the economy at a local and global scale. Explore the science behind best management practices as we journey to feed the world!

Navigating the Financial Aid Process Rod Library 324

Jennifer Sullivan, UNI Financial Aid Counselor & Kristin Peiffer, UNI Assistant Director of Scholarships

Whether you're a current college student, current educator, or a community member, this session will help cover the basics of financial aid programs and also discuss TEACH grant programs and federal loan forgiveness programs

Afternoon Sessions #2: 2:00 to 2:50 pm

Green Iowa AmeriCorps: Providing environmental services and initiatives for K-12 school districts throughout the state

Rod Library 301

Carmen Rae Finken, Green Iowa AmeriCorps Program Manager, UNI Center for Energy and Environmental Education

Green Iowa AmeriCorps employs individuals in a year of national service to increase environmental sustainability in school districts and communities throughout the state. This presentation will focus on the Sustainable Schools branch of the Green Iowa AmeriCorps program, highlighting the work that our AmeriCorps members are accomplishing in several Iowa school districts. By incorporating environmental education in the classroom, conducting energy audits, decreasing school food waste, and implementing more sustainable behavioral practices, our Green Iowa AmeriCorps members are leading the "green school" movement here in Iowa. Individuals attending this presentation will learn how they can serve as AmeriCorps members and the benefits associated with the program, as well as how other schools can model these practices to incorporate whole-school sustainability efforts.

What does "NGSS Implementation" Really Look Like?

McCollum Science Hall 112

Mandie Sanderman, Science Consultant, AIW Coach, Central Rivers Area Education Agency

Participants will learn what "NGSS Implementation in Grades K-12" really looks like. We will use an implementation tool called an "IC Map" to determine strengths and areas of focus for growth. This presentation will cover the major innovations of the NGSS and the IC Map will help teachers identify the level to which they are implementing the standards with regards to those innovations.

AMS DataStreme Programs with a Lesson on Measuring Ocean Surface Levels from Space

McCollum Science Hall 118

Todd Boender, 7th & 8th Grade Science Teacher, West Central Valley Middle School

As a participant of the [Maury Project](#), I spent two weeks during the summer at the Naval Academy learning about oceanography. Participants will learn about the American Meteorological Society (AMS) DataStreme Project. A Grades 6-12 science lesson on El Nino La Nina will be introduced. If time permits, a Grades 6-12 science lesson on measuring sea levels from outer space will be shared.

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