UNI Science Education Update Conference
April 4, 2025
AGENDA

Time	Session Title/Description	Location
8:30 AM	**Check In, Continental Breakfast, Exhibits and Session Sign Up Tables**	Commons Ballroom
9:00 AM	**Welcome & Introductions** Maureen Clayton, Associate Dean, Associate Professor, CHAS Larry Escalada, Director of Science Education	Commons Ballroom
9:05 AM	**Keynote Morning Presentation** **Pamela Joslyn** -STEM Educator at Muscatine Community School District, Albert Einstein Distinguished Teaching Fellow Alumnus, Fulbright Distinguished Awards in Teaching Alumnus, PhD Candidate at Drake University, and UNI PD Alumnus	Commons Ballroom
10:00 AM	**Morning Extended Sessions–See Sessions-Pick One**	Locations Vary
11:30 AM	**Lunch//Networking Focus** Provost Welcome Jose Herrera, Provost and Executive Vice President for Academic Affairs	Commons Ballroom

UNI Science Education Update Conference funded by a foundation grant provided by Gary & Myrna Floyd.

Networking Focus Groups:

UNI Physics Endorsement (Jeff Morgan and Larry Escalada)
Iowa Governor's STEM Advisory (Ann Gritzner)
UNI MA in Science Education (Dawn Del Carlo)
Adventureland Physics Day (Tony McCutchan)

Exhibits:
UNI Science Education (Dawn Del Carlo and Alison Beharka)
Blank Park Zoo Education (Ben White and Rachel Shaffer)
UNI Physics (Paul Shand and Jeff Morgan)
Iowa PBS (Tiffany Morgan)
Savvas Learning Company (Jennifer Yates)
Northeast Iowa STEM Hub (Jeff Beneke and Ann Gritzner)
Parametric Studio Inc. (Christopher Whitmer)
Nancy Larson Science (Sarah Johnson)
Parametric Studio (Christopher Whitmer)
Winterset Community High School (Tony McCutchan)

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**	Commons Ballroom

Refreshments, Evaluations, Door Prizes, & Farewells!

Keynote Morning Presentation (9:05 - 9:50 a.m.)

Morning Sessions (10:00 am – 11:20 am)

Tiffany Morgan - *Latham 232*
Local Phenomena for Your Classroom From Iowa Science Phenomena-Learn how you can start using local phenomena in your classroom today with Iowa PBS Iowa Science Phenomena. This session will introduce educators to the site and service, discuss phenomena-based teaching strategies, and share how teachers can contribute

Chelsie Byram and Jason Martin-Hiner - *McCollum Science Hall 118*
Uncovering Biology, Chemistry, and Physics in Earth Science Phenomena-This session explores an integrated approach and allows participants to experience unearthing Biology, Chemistry, and Physics standards within an Earth Science context. Figuring out Earth Science phenomena requires connecting big ideas across domains.

Michelle Tindall - McCollum Science Hall 112
OpenSciEd: Instructional Routines that Put Your Students at the Center of the Learning-Deep learning is achieved when students are presented with an engaging phenomenon they can't initially explain. By employing the tools of science, students are able to develop an explanation for the phenomenon through investigations and evidence-based arguments.

Seth Johnson and Monica Uribe - ***Commons Ballroom***
(Elementary Education and Early Childhood Majors Only)
NASA Next Gen STEM: Inspiring Young Scientists - Help inspire young learners to become part of NASA's future workforce! This hands-on session will guide you through a variety of NASA developed activities that help introduce them to scientific investigations and build their STEM identities.

Afternoon Sessions #1 (1:00 pm – 1:50 pm)

Christopher Like - *Commons Ballroom*
Iowa's Science Standards 2025 and Beyond - This session will focus on proposed changes to the science standards document for Iowa.

Pete Berendzen - *McCollum Science Hall 176*
Syndaver Laboratory Exploration - Meet the most advanced synthetic cadavers in use to teach about human anatomy in UNI's Biology Dept. Interact with the syndavers, learn how they are used in undergrad courses, & discuss knowledge/skills essential for students interested in health careers.

Seth Johnson and Monica Uribe - NASA (Middle School)
McCollum Science Hall 118
NASA Next Gen STEM: Thinking Like an Engineer - NASA needs engineers! In this hands-on session you will be introduced to activities that utilize the Engineering Design Process, a step-by-step process that helps participants engineer solutions to problems related to NASA missions.

Michelle Tindall - *McCollum Science Hall 112*
Using Science & Engineering Practices to Help Students Uncover Key Concepts in Science - OpenSciEd puts students in the role of scientists by engaging them in the Science & Engineering Practices in order to figure out a complex phenomenon. Participants will experience an OpenSciEd mini lesson to explore how OpenSciEd makes use of investigation.

Jen Yates/Greg Sloan - Latham 232
The Power of Yeast
Step into the fascinating world of fermentation with us at [winery/pizza joint/bakery/brewery] for an unforgettable hands-on science experience! In "The Power of Yeast," you'll explore the magic of yeast in action by setting up and observing fermentation in different environments. Discover how this tiny organism plays a massive role in our daily lives, from baking bread to brewing beer. Plus, you'll walk away with ready-to-go classroom activities that will bring the wonders of biochemistry to your students.

Afternoon Sessions #2 (2:00 pm – 2:50 pm)

Seth Johnson and Monica Uribe - NASA (High School)
McCollum Science Hall 118
NASA Next Gen STEM: Making Data Driven Decisions - How does NASA decide where to explore? Using real NASA data, participants assume the roles of planetary scientists to prioritize mission criteria and analyze different geologic features on the surface of Mars in order to choose the best landing site.

Paul Shand - *Begeman Hall 14*
Preparing Students for Quantum - Participate in hands-on activities and learn about quantum information systems and computing. There will be time to discuss secondary knowledge/skills that contribute to undergraduate success.

Michelle Tindall - *McCollum Science Hall 112*
Using Science & Engineering Practices to Help Students Uncover Key Concepts in Science - OpenSciEd puts students in the role of scientists by engaging them in the Science & Engineering Practices in order to figure out a complex phenomenon. Participants will experience an OpenSciEd mini lesson to explore how OpenSciEd makes use of investigation

Whitney McWilliams - *Latham 101*
Realistic Implementation of OpenSciEd: How Does it Work in My Classroom? Immerse yourself into a conversation & real classroom examples on how to make OSE work in your classroom. Come see real examples of how to modify or adjust OSE to best fit SPED accommodations or general population adjustments without losing the rigor

Jason Martin-Hiner - *Latham 232*
Using Talk Moves to Support Equitable Discussions - Discourse and talk moves play critical roles in students figuring out phenomena in science classrooms. In this session, we'll examine which talk moves to use based on discussion goals and analyze classroom routines that support a community of learners.