

Carolinas STEM Teaching & Learning Conference

Mebane Hall, Cato College of Education, UNC Charlotte, January 2, 2026

Concurrent Sessions 2:05 – 3:05 pm

Ute Lentz, A.L. Brown High School

STEM plus AI: Classroom-Ready Approaches
for Middle and Secondary Educators

Grade Level: Grades 6-12 Location: 102

Alyson VanAlphen, Weddington Middle School

Sparkling Curiosity:

Inquiry-Based Science & Engineering in Action

General Science All Grades Location: 103

Brittany Jones, UNC Charlotte

STEM At a Cost: Linking Spirit Murder to
Black STEM Identity and Achievement

General Science All Grades Location: 110

Ginaya Littlejohn, Eureka Discovery Lab, Inc.

Engineering Eureka Moments:

Reimagining STEM Outside Of The Classroom

General Science All Grades Location: 165

Kerrie Lalli, Sedgefield Montessori

Teaching with SEPs

Grade Level: PreK-5 Location: 166

Regina Smith, Kearns Academy of

Computer and Information Sciences

Shake it Up: Active Learning, Empowered Students

Grade Level: Grades 6-12 Location: 032

Adam Haas, Rocky River Elementary & Suzanne Raxter, CMS

Building Scientific Thinkers Through Investigations

General Science All Grades Location: 036

Kelly Koller, Oakhurst STEAM Academy

Using AIG Strategies to Strengthen your STEM Instruction

Grade Level: Grades K-8 Location: 038

3:05 pm

Pick up Certificates and Parking Passes at Registration



UNIVERSITY OF NORTH CAROLINA
CHARLOTTE

CENTER FOR
STEM EDUCATION

January 2, 2026

Carolinas STEM Teaching & Learning Conference

Mebane Hall
Cato College of Education
UNC Charlotte

The Carolinas STEM Teaching & Learning Conference is co-sponsored by the UNC Charlotte's Center for STEM Education and the North Carolina Science, Mathematics, and Technology Education Center (SMT) in partnership with the Burroughs Wellcome Fund.



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Concurrent Sessions 1:00 – 2:00 pm

Lori Robinette, Shiloh Valley Elementary
 Ignite Student Curiosity with
 Natural Phenomenon

Grade Level: Grades K-8 **Location: 102**

Angela Meekey & Justine Saunders,
 Jay M. Robinson Middle School
 SEPs 1-2-3

General Science All Grades **Location: 103**

Karla Miner, Davie County High School
 Modeling the Design Process: Inside Out
 General Science All Grades **Location: 110**

Alfreda Reynolds, Wilson STEM Academy
 Empowering and Engaging
 Middle Grades Learners with STEM Teaching
 Grade Level: Grades 6-8 **Location: 165**

Lily Dancy-Jones, Bio-Network
 Sparking Curiosity with Investigative Phenomena
 Grade Level: Grades 6-12 **Location: 166**

Eliza Russell & Jason Beideck, NASCAR Hall of Fame
 Forces in Racing (Human and Nature)
 Grade Level: Grades K-8 **Location: 032**

Ingrid Humphrey, Charlotte Mecklenburg Schools
 Facilitating Learning in the HS Science Classroom
 Grade Level: Grades 9-12 **Location: 036**

Sharon Okoye, Albemarle Road Middle School
 Managing Student Research Outside of the Classroom
 General Science All Grades **Location: 038**

AGENDA

Mebane Hall am

- 7:45 Registration –Lobby
- 8:15—9:15 Concurrent Sessions
- 9:20—9:45 Exhibitor Session
- 9:50—10:50 Concurrent Sessions
- 10:55—11:20 Exhibitor Session

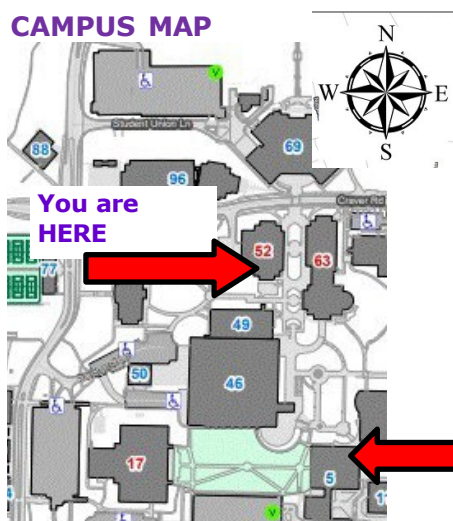
Cone University Center

- 11:30 Buffet Lunch –Lucas Room
Cone University Center
(See Map Below Bldg. # 5)
- 12:00 Program & Keynote Speaker

Mebane Hall pm

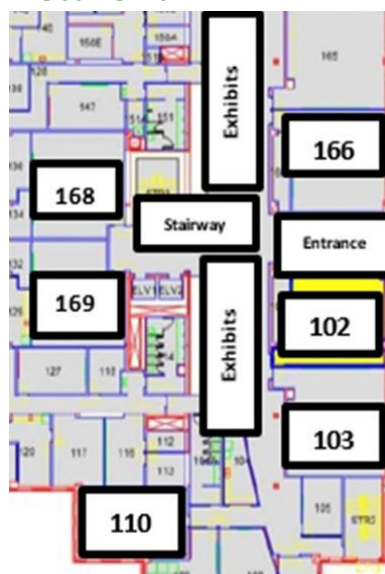
- 1:00—2:00 Concurrent Sessions
- 2:05—3:05 Concurrent Sessions
- Conclusion Certificates & Parking Passes—Lobby

CAMPUS MAP



Bldg. # 5
 Cone University Center
 Lucas Room

First Floor Mebane Hall



Second Floor Mebane Hall



Ground Floor Mebane Hall



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Concurrent Sessions 9:50 – 10:50 am

Lindsey Sipe, NC DPI

The Case of The Curious Al

General Science All Grades **Location: 102**

**Danielle Cunningham, Club Blvd Elementary School & May Freeman,
Durham County Schools**

Fostering Student Engagement in Virtual K–8 STEM

Classrooms: What Teachers Say Works

Grade Level: K-8 **Location: 103**

David Pugalee, UNC Charlotte & Xin Liu, CMS

Promoting Combinatorics in Mathematics at all Levels

Morning Workshop Session 2 (2 sessions required)

General Science All Grades **Location: 110**

Melaine Rickard, The Center for Inquiry-Based Learning

Implementing Science and Engineering Practices

Grade Level: Grades K-8 **Location: 165**

Nicole Mills & Whitney White, RTI International

Unleaded Learning: Cross-Disciplinary Resources to

Engage Students in Water Quality

General Science All Grades **Location: 166**

Jennifer Brazee & Brittany Banks,

North Kannapolis Elementary

SEPs in Action

Grade Level: PreK -5 **Location: 032**

Tamica Stubbs, Bio-Rad Explorers

Unveiling the Hidden Risks of Vaping:

A Physiological and Genetic Investigation

Grade Level: Grades 6-12 **Location: 036**

Sarah Rogers, Iredell Statesville Schools Prime Time

Roll For Initiative –

Using TableTop Roll Playing Games in the Classroom

General Science All Grades **Location: 038**

10:55–11:20 am Exhibitor Session

Exhibitors

Carolina Biological	Carolina Biological Supply Company partners with districts and schools to deliver and support exemplary K-12 science curriculum programs. In addition to developing our own K–5 science curriculum, Building Blocks of Science 3D, Carolina proudly partners with the Smithsonian Science Education Center and Open SciEd to offer high-quality K-12 science materials.
Bio Rad Explorers	Bio-Rad Explorer™ brings authentic biotechnology and molecular biology to classrooms through hands-on, NGSS-aligned labs. Using real research tools like PCR, gel electrophoresis, ELISA, protein analysis, and more, students explore modern science while educators receive robust curriculum support. The program empowers schools to deliver engaging, inquiry-based STEM learning experiences.
Center for Inquiry Based Learning	Our mission is to support North Carolina K-8 teachers with training and the most engaging, integrated, hands-on STEM curriculum materials that promote creativity, collaboration, and communication.
The Clean Classrooms for Carolina Kids™	The Clean Classrooms for Carolina Kids™ program is a partnership between RTI International, the North Carolina Department of Health and Human Services (NC DHHS), with the North Carolina Department of Public Instruction (NCDPI) as a liaison. The program partners with public schools, licensed child care centers, and family child care homes to identify and eliminate lead and asbestos hazards where children learn and play. The program includes curriculum support materials designed to engage students, teachers, parents, and the school community in the lead exposure prevention work that has been ongoing in North Carolina schools through the Clean Classrooms for Carolina Kids program.
HHMI BioInteractive	BioInteractive is a leading provider of free classroom resources and professional development for high school biology educators. We connect students to big ideas in biology, promote engagement through science practices. Our resources use evidence-based strategies to support equitable access to science and are authentic, accurate, and story-driven science resources. We offer a growing collection of resources in Spanish.
Holbrook Field Trips	Holbrook Field Trips is a family-owned and operated educational travel company celebrating 50 years of creating meaningful learning experiences beyond the classroom. We specialize in all-inclusive, custom field trips that connect classroom STEM concepts to the real world — from hands-on science in Charlotte to technology and innovation tours in Washington, D.C., and Orlando. Our team handles every detail, including transportation, lodging, meals, and attractions, so teachers can focus on engaging their students. Whether you're exploring NASA, theme park engineering, or local ecosystems, we make STEM come to life through organized and inspiring travel experiences for K–12 students across the Southeast.
Foldscope Instruments	Foldscopes make science more accessible to all students of all ages and abilities! Our durable, portable paper microscopes are low-cost devices that bring the wonders of the microscopic world to all. Foldscopes are capable of 50X, 140X, and 340X magnification at 2 micron resolution. These tools allow your students to take their explorations out of the classroom - letting them experience the joy of discovery wherever their curiosity takes them!
LEGO Education	For almost 50 years, we've brought our unique hands-on approach to schools and beyond with our beloved robotics and STEAM solutions. Now, we're thrilled to bring this approach to science classrooms all over the world with LEGO® Education Science - a learning solution that thousands of students have tested and hundreds of educators helped to develop. We work alongside administrators and teachers to implement standards-aligned, inquiry-based learning programs for K–8.
NASCAR Hall of Fame	"Math, Science and History are more exciting at 200 miles per hour! A field trip to the NASCAR Hall of Fame offers students the ability to learn math, science, and social studies in our expansive and dynamic venue. We provide additional education workshops that adhere to state and national learning standards and customize our programs to suit specific needs of each classroom. With so much to see and do, the NASCAR Hall of Fame is an ideal way to translate education into the real world."
NCSTA	The North Carolina Science Teachers Association (NCSTA) promotes excellence in science teaching and learning, advancing, stimulating, and coordinating science education for all levels in NC through professional development, grants, awards, resources, and advocacy for scientific literacy and evidence-based instruction in schools. They support educators by offering networking, leadership opportunities, and resources to foster critical thinking, innovation, and problem-solving in students.
NCSSM	Currently recruiting staff and students for Summer Accelerator! More instructor opportunities will be available for Summer 2027. Join the North Carolina School of Science and Mathematics recruitment effort to offer your brightest students rigorous, immersive academic enrichment this summer. Our Summer Accelerator camps are designed to challenge and inspire rising 5th–12th graders in advanced STEM and Humanities topics. We offer day camps for rising 5–6th graders and residential camps for rising 7–12th graders at our Durham and Morganton campuses.
NC Science Leadership Association	NCSLA provides educators in both formal and informal science education forum to exchange ideas and information, advancing quality STEM instruction, and influencing education policies and legislation.
SMT Center	The SMT Center focuses on improving education as a means of providing all students in North Carolina with the knowledge and skills to have successful careers, be good citizens, and advance the economy of the state.
STEM Pre-College Program	The goal of the STEM Pre-College Program is to broaden the pool of students pursuing STEM majors and careers. We provide enrichment activities on and off the campus of the UNC at Charlotte. Learn more about the UNC Charlotte STEAM Festival APRIL 27, 2026. Visit this exhibit for more information.
Sullenberger Aviation Museum	Unleash your potential with Sullenberger Aviation Museum's educational experiences! Immerse yourself in hands-on STEM adventures, exploring aviation, drones, engineering, programming, and design. Visit our booth to learn how these tailored activities can ignite curiosity and provide dynamic career exposure through experiential learning. Let your future take flight!
Vernier Science Education	Vernier Science Education provides data collection technology for real-world investigations in biology, chemistry, physics, and environmental science, helping bridge the gap between traditional learning and practical scientific discovery.

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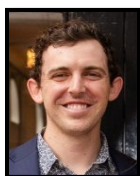
Luncheon Program Welcome

Alisa Wickliff, Associate Director, Center for STEM Education

Dr. David Pugalee, Director, Center for STEM Education

Greetings from the Cato College of Education

Dr. Scott Kissau, Associate Dean



Keynote Speaker

John Bartlett

Vice President of Education
Sullenberger Aviation Museum

Founded in 1992 by aviation enthusiast and Carolina's Wing Commander of the Commemorative Air Force, Floyd Swinton Wilson, and his wife Lois. SAM stands proudly alongside Charlotte Douglas International Airport. The museum is home to iconic aircraft and historical treasures, including the celebrated "Miracle on the Hudson" exhibit—featuring the very plane that safely landed in New York's Hudson River on January 15, 2009.



SAM tells stories of innovation, courage, and perseverance, inspiring visitors to chase their dreams and reach for the skies. Sullenberger Aviation Museum (SAM) harnesses the awe-inspiring power of flight to educate, inspire, and elevate the next generation. Our mission is to spark curiosity and open doors to careers in aviation and aerospace, while fostering economic growth and opportunity in Charlotte and beyond.

SAM is more than a museum—it's an immersive experience where visitors of all ages can explore the remarkable stories, innovations, and diverse individuals who shaped aviation history. Through our extensive collection of aircraft, artifacts, and interactive exhibits, we bring aviation to life, offering hands-on learning that encourages exploration and discovery.

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Concurrent Sessions 8:15 – 9:15 am

Tomeka Pope, Little Engineers STEM Club

Opening Doors to the Future: Community Partnerships
for STEM Career Exposure

General Science All Grades **Location: 102**

Peter Panico, Steele Creek Elementary STEM Investigations not
Experiments

Grade Level: Pre-K-5 **Location: 103**

David Pugalee, UNC Charlotte & Xin Liu, CMS

Promoting Combinatorics in Mathematics at all Levels

Morning Workshop Session 1 (2 sessions required)

General Science All Grades **Location: 110**

Erin Dominov & Alicia Yewcic, Governors Village STEM Academy

Building a Unit Storyline (Curriculum Development)

Grade Level: Grades K-8 **Location: 165**

Tom Williams & Judy Day, NC Science Fair

Student Research & Thermofisher Junior Innovators Challenge

Grade Level: Grades 6-8 **Location: 166**

Heather Cardenas & Sandy Richards, Lincoln Charter School

Maker Magic: micro:bit & MakeyMakey in the K-8 Classroom

Grade Level: Grades 6-8 **Location: 032**

Tim Guilfoyle, HHMI BioInteractive

Bringing Ecology to Life: Exploring and Modeling Species Interactions
with HHMI BioInteractive

Grade Level: Grades 9-12 **Location: 036**

Aleksandra Schilis, CourseKata

Modernizing High School Statistics with Mathematical Modeling

Grade Level: Grades 9-12 **Location: 038**

9:20-9:45 am Exhibitor Session