



The SPARK

CERT's
Summer 2019
Newsletter

The Center for Energy Research and Technology is an interdisciplinary energy research center, created to foster collaborative research and development of new energy-related technologies. The center focuses on basic and applied research, outreach and extension activities and education.

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CERT Announces SEUSS: The Southeast Urban Sustainability Summit August 14-15, 2019

CERT's Dr. Vicki Foust has received a \$50K NSF grant to fund an upcoming event to advance research in urban sustainability. The Southeast Urban Sustainability Summit (SEUSS) will develop a research network comprised of academics, municipalities, industries, and advocacy groups with the vision of advancing research in urban sustainability in the state of North Carolina. SEUSS will be held August 14-15, 2019 on the campus of N.C. A&T in Greensboro.

SEUSS will convene a diverse network of stakeholders from across the state committed to identifying and addressing North Carolina's most pressing sustainability and resilience issues related to energy, water, waste, transportation, housing, health/safety and food/agriculture. The collaborations formed at SEUSS will seek additional funding to conduct the research needs identified at the conference. The resulting research agenda will have implications for the entire southeastern U.S.

SEUSS is led by Principal Investigator Dr. Vicki Foust with the Center for Energy Research and Technology at N.C. A&T, in collaboration with leadership from N.C. A&T, UNC Greensboro, Appalachian State University, NC State University, the Southeast Sustainability Director's Network, the Environmental Defense Fund and the North Carolina Department of Environmental Quality.

For more information about SEUSS and to register for the event, please contact Dr. Vicki Foust at vafoust@ncat.edu, 336-285-4738.



SEUSS

Southeast Urban Sustainability Summit

CERT Educational Series Continues its Expansion of Module Offerings for Guilford County Science Teachers

CERT continues to expand its series of Energy Education Modules used by teachers in the classroom to teach energy concepts. These modules align with the North Carolina Science Standards, and all provide a FREE plug-and-play, interactive, video-based and hands-on approach to instruction. These modules were developed to provide teachers the resources to expose students to labs using equipment that might not be available in the schools. The teacher acts as a facilitator and resource, while the video teaches and guides the students through the lab using kits. Teacher preparation is minimal (< 15 minutes per module). Two new modules are available for this fall!

"Why Recycle?"

The Why Recycle? Module provides students with a matching card game that promotes understanding of the time it takes for household waste to decompose. The game includes 10 timeline cards that run from one month to 1 million years, and 10 household waste cards. Teams try to figure out how long the household items such as plastic bottles take to decompose. The module contains a plug-in-play video for students to follow, which contains the correct answers, and interesting facts about the amount of US household waste.



"Light and Waves"

The Generate Game Module is an engaging interactive activity to teach students the about properties of light and waves through several experiments that make waves, measure light, discover how light travels, and explore the electromagnetic spectrum. Teachers check out a CERT Light and Waves kit which contains components for 8 stations. The module also includes a link to an instructional video for teachers to watch to learn how to set up the activity. A classroom instructional video is then used to guide the students through the activity. This module links directly with the science curriculum "Essential Standards and Clarifying Objectives" for 6th grade. Specifically, it aligns with the Forces and Motion standard, 6.P.1 (6.P.1.1 and 6.P.1.2) and 6.P.3 (6.P.3.2). To request a CERT Light and Wave kit or additional information, please contact us at CERT@ncat.edu.



Foust Elected Chair of the Greensboro Community Sustainability Council

Dr. Vicki Foust, research associate at CERT has been elected chair of the Greensboro Community Sustainability Council, which advises the City Council in matters related to city sustainability.

The Community Sustainability Council is comprised of nine Greensboro residents appointed by City Council. Members are selected, in part, based on their knowledge and experience related to one or more aspects of sustainability.

Foust is also an advisor to the City of Greensboro Comprehensive Planning Committee. This committee is charged with developing a strategic long-range plan for the city through 2040.



2019 Energy Days a Stunning Success!

More than 100 scientists, N.C. A&T faculty, graduate students and staff were on hand to guide more than five thousand students and members of the public through this year's Energy Days event, which occurred on April 8th and 9th on the N.C. A&T campus.

This year's Energy Days event featured the Oak Ridge National Laboratory's Traveling Science Fair, and was billed as the "Signature Event" of the NC Science Festival happening throughout the month of April. Duke Energy, the primary event sponsor, did a drone demo inside the BB&T Football Stadium showing how the utility uses drones to help communities recover from storm damage. They also performed a safety demonstration educating citizens about the dangers associated with downed power lines.

On April 9th the N.C. A&T Transportation Institute hosted interactive exhibits by transportation entities from around the state as part of Transportation Awareness Day. Numerous vehicles from the Greensboro Transit Authority and Volvo were on "walk-through" display, in addition to other transportation organizations showcasing their products and services.



CERT Participates in Recent STEM- Related Events in Guilford County

The CERT team participated in several outreach events this past spring, including Bluford Elementary School's STEM Day, Brown Summit Middle School STEM Day, and the City of Greensboro's Earth Day Festival.



The Earth Day event, hosted by the Kathleen Clay Edwards Family Branch Library, was a fun, free, educational event for all ages.

Attendees were treated to hands-on nature and STEM science activities from over 50 exhibitors. Topics included nature photography, alternative vehicles and displays, a tiny house, live music, live animals, gardening and technology exhibits.

N.C. A&T Hosts EO 80 Meeting on Campus May 17th

North Carolina's Governor Roy Cooper has issued an executive order, EO80, that hopes to achieve significant energy reductions, carbon emissions reductions, and increase in number of electric vehicles in the state over the next six years.

NCA&T hosted the Triad Region "Listening Session" led by the NC Department of Environmental Quality. Attendees participated in developing a clean energy plan, provided input on key energy questions and shared thoughts on North Carolina's clean energy future.

