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19TH OKLAHOMA ENVIRONMENTAL EDUCATION EXPO



THE AMAZING EE RACE STEM EDITION



February 5, 2016

Rosser Conservation Education Center Oklahoma City Zoo

Hosted by Oklahoma Association for Environmental Education



RACE DAY AGENDA



- 8:30 am Race Participants Check-In (*registration*) & Pit Row (*exhibits*)
- 9:00 am Morning Pre-Race Meeting in Auditorium
Welcome to Race Day
Pre-Race (*keynote*) Address by Tiffany Neil & Levi Patrick
- 9:30 am Break to visit Concessions & Pit Row
- 9:45 am Race Qualifying Heat I
- 10:45 am Break to visit Concessions & Pit Row
- 11:00 am Race Qualifying Heat II
- 12:00 pm Lunch
- 12:45 pm Afternoon Pre-race Meeting in Auditorium
- 1:15 pm Start of Race
- 3:30 pm End of Race & Post-Race Meeting in Auditorium



PRE-RACE ADDRESS



Everybody loves STEM, but agreeing on a definition that everyone loves is no small task. STEM represents an opportunity to engage educators, parents, community members, and business leaders in a rich conversation about the learning experiences our children have and the future we hope they will have. Together, we'll explore the meaning of STEM and how it connects to Environmental Education. Levi Patrick, the Director of Secondary Mathematics, and Tiffany Neill, the Director of Science Education at the Oklahoma State Department of Education, will also provide a framework for participants to easily utilize as they are considering STEM in their classrooms or schools.



SPEAKERS



Tiffany Neill is the Director of Science Education for the Oklahoma State Department of Education. Tiffany received her Bachelor of Science degree from Northeastern State University in 2002 and began teaching science and language arts courses at Attucks Alternative Academy in Vinita, Oklahoma and later taught Biology 1 and Environmental Science courses at Vinita High School. In 2007 Tiffany began working as a science specialist at the University of Oklahoma's K20 Center for Education and Community Renewal. Tiffany completed her Master's Degree in Instructional Leadership and Academic Curriculum from the University of Oklahoma in 2012 and is currently pursuing a doctorate degree at the University of Oklahoma in science education. In her current position as the State Director of Science Education, Tiffany provides instructional support to science educators across the state so that they can provide exciting STEM experiences in their classrooms.

Levi Patrick serves the state of Oklahoma as the Director of Secondary Mathematics Education and helps to lead a number of state programs including the Mathematics and Science Partnership, Presidential Awards for Excellence in Math and Science Teaching, and OKMath & OKSci Leadership. Levi is also the Vice-President for Programs for the Association of State Supervisors of Mathematics. He taught 8th grade Algebra 1 and Geometry in Oklahoma City and Putnam City Public Schools. His wife, Roslyn, is a high school English teacher in Yukon and they live in Oklahoma City.

Danny Mattox is a Science Curriculum Designer for the K20 Center for Education and Community Renewal at the University of Oklahoma.

Tina Rogers is a 20-year veteran teacher of science from grades 7 to 12. Over the length of her teaching career she has taught courses from life, earth, and physical science disciplines including biology, chemistry, physics, environmental science and MS integrated sciences. In addition to teaching, Tina has held multiple leadership positions in the state including committees with the State Department of Education to offices with the OK Science Teachers Association. Currently, Tina boasts of being a Beta Class OKSci graduate and leader of the steering committee tasked with the development of Project Newton. In the summer of 2016, Tina will present her capstone research at Montana State University for completion of the MSSE Masters of Science Education degree. Her research is titled "Using Technology to Zap Zeros and Increase Comprehension of Science Concepts."

Megan Veldhuizen has been teaching for 6 years with Lawton Public Schools where she has taught Kindergarten, Transitional First Grade, K-5 computer science and recently became the grant facilitator for her district. In 2014, Megan was named OSTA's Elementary Teacher of the Year and K20 Center's SKIE Statewide Award winner for innovation in the classroom. Megan is also an alumni of the OKSci/OKMath Leadership program through the Oklahoma State Department of Education.



QUALIFYING HEATS



	DISCOVERY THEATRE	CLASSROOM 3
HEAT 1 9:45 am - 10:45 am	<p align="center">Elementary Race Teams</p> <p><i>Dendrochronologist Detective</i></p> <p>Led by Danny Mattox</p> <p>Educators will participate in a lesson titled, “Dendrochronologist Detective” in which students take on the role of a dendrochronologist by studying tree rings and historical events in Oklahoma. Participants will learn about the Oklahoma Mesonet, a world-renowned weather observation network with a robust website full of content that can be used in the classroom. We will also demonstrate the Oklahoma Mesonet’s free app that gives validated, up-to-the-minute weather data for 120 locations in our state. We will also delve into a lesson repository full of vetted 5E lesson plans brought to you free of charge by the K20</p>	<p align="center">Secondary Race Teams</p> <p><i>Save the Penguins</i></p> <p>Led by Tina Rogers</p> <p>Educators will participate in a STEM activity designed to help middle grade students with science concepts related to heat and energy as well as teach them the basics of engineering design. Participants will design and build a shelter for an ice cube-shaped penguin that reduces heat transfer and keeps the penguin from melting. Participants will also come away with a sense of how engineers are people who design solutions to problems. This activity and all associated documents can be found online at: http://www.auburn.edu/~cgs0013/ETK/SaveThePenguinsETK.pdf</p>
HEAT 2 11:00 am - 12:00 pm	<p align="center">Secondary Race Teams</p> <p><i>Dendrochronologist Detective</i></p> <p>Led by Danny Mattox</p> <p>See above for description of session.</p>	<p align="center">Elementary Race Teams</p> <p><i>Mystery STEM Activity</i></p> <p>Led by Megan Veldhuizen</p> <p>Participants will explore the environment and systems around them using hands-on activities they can take back to their classrooms and use immediately. This session will showcase STEM connections teachers can make in their classroom and easy suggestions to start tomorrow. Great science resources will be shared and excellent ways to stay connected with the science community across the state will be discussed.</p>



RACE NOTES

