

Oklahoma

Science Teachers Association



Fall Conference

*“Get In The ZONE: Central
Standards Time”*

*Saturday, 2 November 2013
University of Central Oklahoma*

Workshop Session Descriptions

Session	Description	Presenter(s)
Hands-on, Minds-on: Bringing the Museum to the Classroom with Discovery Kits	The Sam Noble Museum offers teachers the opportunity to bring authentic specimens and artifacts into their classrooms through Discovery Kits. Teachers will listen to a short presentation and then work in groups on activities from each of the kits.	Helena Lucas, Carrie Miller-DeBoer
Paris? Kenya? The Amazon? Where in the World do You Want to Go?	Where in the world would you go if you didn't have to pay for it? Learn about the Fund for Teachers grant. Enrich your science classroom with your travel experience! Must have 3 years experience to apply.	Ava Wilhelm
Formative Assessment in the Biology Classroom	Formative assessments are useful tools for teachers to gauge student progress. Join us as we share formative assessment strategies we have found to work especially well in the Biology classroom.	Traci Richardson, Lin Andrews
Scientific Argumentation: Getting Past "Just Because"	Scientific argumentation is an effective way to incorporate Common Core and NGSS standards in a science class. In this interactive session, participants will learn about the CER (claims, evidence, reasoning) model for scientific argumentation. This model promotes higher order thinking and scientific reasoning.	Brandi Williams
Explore the NSTA Learning Center	Participants will discover the benefits of the NSTA Learning Center website. Features include an online community, access to books and articles, online courses, and lesson plans.	Brandi Williams
Boost Those Scores!	In this interactive session, participants will learn techniques for analyzing OCCT and EOI scores, discover resources to help focus instruction, learn which skills students must develop in order to perform well on the state exams, and discuss strategies for improving rigor in the science classroom.	Brandi Williams, Quentin Bidy
Do Teachers Have Good Taste?	What's in your soda can? Come experience how case studies can incorporate scientific practices, new frameworks, and Common Core into your classroom. Discover new ways to engage your students in critical thinking through guided-inquiry via science notebooking.	Carrie Miller-DeBoer, Wendy Martin
Science Take Out: Modeling Enzymes and Protein Synthesis	Learn how versatile Science Take Out kits can be used in secondary biology classes to model the following: * Enzymes and Lactose Intolerance; * From DNA to Protein Structure and Function; * A Model for the Lac Operon and how it works.	Eileen Grzybowski, Debbie Hill
Motor Mysteries- A STEM Approach	Are electric motors a mystery to you? Join us in this workshop to learn how electricity and magnetism are related. Then, design, construct and test a motor. Equipment door prizes and free resources are provided. (<i>Vender Presentation</i>)	Kat Mills, Nancy Bowdre
Teaching Genetics with Crazy Traits	This highly engaging, hands-on workshop explores Mendelian and non-Mendelian genetic mechanisms using innovative inquiry strategies. Equipment door prizes and free resources will be provided. (<i>Vender Presentation</i>)	Kat Mills, Nancy Bowdre
Fun with Atoms	Join us for this hands-on workshop and play several "atom building" games. These games are designed to teach atomic structure. Equipment raffle and free resources.	Kat Mills, Nancy Bowdre
Science Take Out -Cell Communication and a Kidney Problem	Make a simple model to illustrate how a sending cell communicates with a receiving cell and apply to normal glucose regulation and normal synaptic transmission. Explore how diabetes and drugs interfere with cell communication. Also, follow the case of a young woman who has symptoms of kidney disease, conduct a simulated urine test and a simple model of normal kidney filtration and reabsorption. Use the model to explain how kidney disease interferes with normal kidney function.	Deborah Hill, Eileen Grzybowski
Teaching Physics	This session will focus on student-centered teaching in physics. Hands on activities will be presented by teachers who are participating in the NSU Chemistry and Physics Academy which is funded by the Oklahoma State Regents for Higher Education.	April Adams

Teaching Chemistry	This session will focus on student-centered teaching in chemistry. Hands on activities will be presented by teachers who are participating in the NSU Chemistry and Physics Academy which is funded by the Oklahoma State Regents for Higher Education.	April Adams
Connecting students with Real Science: Tales from a Teacher in the Arctic and Teacher at Sea	Jenks teacher Alicia Gillean shares her experiences as part of science teams in the Arctic and at sea, including how she uses these experiences with students. Leave with classroom lessons/resources and information about applying for your own field science experiences.	Alicia Gillean
iPad Apps and Scientific, Engineering, and Mathematical Practices	Several fun elementary school iPad apps for science, technology, engineering, or mathematics will be explored, and an annotated bibliography of approximately 100 apps will be shared in this interactive workshop. Each app is aligned with Scientific, Engineering, and Mathematical Practices.	Timothy Laubach
Literacy's Purpose and Placement in Scientific Practice	Scientists utilize texts to stimulate and answer questions; this represents the authentic use of literacy in scientific practices. Our session explores the purpose and placement of text in science classrooms. Teachers will experience model lessons and gain instructional strategies supporting the integration of literacy in science and the anticipated shifts with the new Oklahoma Academic Standards for Science.	Tiffany Neill, Josh Flores
An Eruption of Cooperative Learning	Students will stay on task in this comprehensive volcano research project.	Lisa Malone, Lisa Clemons
¿Check¿ your understanding of Nature of Science	Achieving a scientific literate populace is the goal for science education reform. The third leg of this goal is a thorough understanding of the nature of science. This session engages participants in three fun nature of science lessons that are sure to be a hit in any science classroom.	Julie Angle
Connecting the Dots: Reading, Thinking and Writing in Science	To think critically about what they read, students must go beyond simply reading and answering questions about the reading. This presentation provides examples of incorporating scientific reading, how students interact with it, and different ways they can share their new knowledge.	Catherine Wilson
Botball Educational Robotics	Come play with robots and while you are learning to program them you can learn how to get your students involved in the Botball Educational Robotics program using available OSDE/Botball grant funding.	Steve Goodgame, KIPR Staff TBD
Writing Tasks and Making Meaningful Connections in Science Classrooms	Middle school students have difficulty to understand the terminology and new vocabularies used in science textbooks. This paper provides a sample of writing task, which aligns with the Common Core State Standards, and is implemented a science classroom.	Seyithan Demirdag, Timothy A. Laubach
Write for the OSTA Journal: OJSS	Come join the editors of the new OSTA journal: the Oklahoma Journal of School Science (OJSS). Learn how to prepare and submit your teaching ideas for publication in our journal! Stop by and learn how easy it is to share your teaching expertise with the entire OSTA community!	Toni Ivey, Tim Laubach, Becky Hammack
NDD- Oh, No! Not Another Acronym	Action strategies for teaching concepts related to conservation and ways to adapt them to your classroom. Easy to implement and get students out of their seats to engage in the exploration of animal relationships, human impact, and interconnectedness.	Karen Bulluck
Bring STEM to K-6 with the Elementary Science Olympiad	The Elementary Science Olympiad (ESO) is the perfect complement to any K-6 science program. Support your normal classroom routine with an all-building Science Olympiad Fun Day, or bring in experts and parent volunteers to run a Science Olympiad Fun Night. If you want to develop a feeder program for your district's middle school Science Olympiad program, run a grades 3-6 competitive tournament, just like the older kids, and with many of the same events, just scaled down to size.	Bob Melton

Breeding Critters	Make the study of genetics more meaningful for students. Join us for an activity sequence from Issues and Life Science from LAB-AIDS that lays a framework for dominant/recessive as well as other patterns of inheritance. Pedigrees are introduced as another way to study the behavior of certain genes in humans. <i>(Vender Presentation)</i>	Oralia Gil, Teri Jester
The Chemical Formula and Amino Acids	What does "balancing" a chemical equation mean? If a student doesn't fully understand the chemical formula, then moles, reactions, and stoichiometry are confusing. Join us for some intuitive lessons that allow students of all levels to master the chemical formula. <i>(Vender Presentation)</i>	Oralia Gil, Teri Jester
Energy Flow Through an Ecosystem	Participants use an interactive card sort of organism cards and ecosystem events to predict the effect of different events on the food web and the ecosystem. They then construct an energy pyramid to examine how much energy is stored at each level of a food web. <i>(Vender Presentation)</i>	Oralia Gil, Teri Jester
Using STEM in an Environmental Science Elective	STEM (Science, Technology, Engineering, and Math) is a term that has become more and more popular as the federal government pushes for improvements in student performance in these vital areas. This presentation will demonstrate how STEM can be seamlessly integrated into the school curriculum using the PLT GreenSchools! I will highlight how my students use STEM to reduce unhealthy CO2 levels throughout their school, share how STEM is effectively integrated into the Clyde Boyd curriculum, and discuss the sustainability of the PLT GreenSchools! program model.	Kenneth Cole
NABT BioClubs and Affiliates	The NABT BioClub provides a number of opportunities for students, including outreach activities, the preparation of experiments, presentation of technical information before groups, and sharing information about career, technical training, and college opportunities. Learn how you can start a BioClub at your school. In this session we will also learn how Oklahoma biology teachers can become part of an NABT affiliate organization in Oklahoma	Kay Gamble, Bob Melton
What's Your STEM-Q	In-this session, we will examine STEM education for Prek-6th. Teachers will discuss what STEM might look like in the classroom, how to get started and provide practical hands-on activities and ideas to incorporate the application of mathematics, science, engineering, and technology. Teachers will recognize that elementary STEM projects can be engaging and hands-on while also enhancing the curriculum and turning students into creators, builders, and innovators. Participants will engage in hands-on STEM activities. Lessons will be provided for all activities.	Theresa Balan, Carol Goodgame, Patricia Turner



*Congratulations
to Deborah Hill
The 2013 Outstanding Biology
Teacher Awardee*

OSTA would like to thank CASMEO
for their support of the 2013 OSTA
Outstanding Educator Awards



OSTA Going Green

Agendas, Programs, and parking informations will be made available through the OSTA Website.

<http://www.oklahomascienceteachersassociation.org/>



UCO wireless network
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Open a browser. You will automatically be presented with the UCO Wireless login page. Use the following CASE SENSITIVE credentials to login to the UCO wireless network.

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*Certificates may be picked up at the OSTA Silent Auction during the afternoon sessions.

Check out the offerings at the

OSTA Silent Auction



Proceeds go to The **Oklahoma State Science & Engineering Fair** and **Oklahoma Junior Academy of Sciences**.

Bidding ends at 4:10 PM

Oklahoma Science Resources



Oklahoma Science Teachers Association



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<http://www.oklahomascienceteachersassociation.org/>

Get your OSTA apparel from

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OSTA Fall Conference Exhibitors

LAB-AIDS

Dr. April Adams

Educational Robotics - Steve Goodman

The Sam Noble Museum

Oklahoma Green Schools Program Inc.

Sangari Active Science

Oklahoma Floodplain Managers Association

PEARSON

CPO Science

Delta Education

Invent.org –Annette Phillips

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OSTA thanks Pearson for their continued support of the Fall Conference and also their support for the Awards Reception



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*OSTA Outstanding Educator of the Year Awards
2013 Recipients*

Elementary Division Darlene Black - Marlow Public Schools

Middle School Division Kenneth Cole- Clyde Boyd Middle School

High School Division Karen Evans- Yukon High School

College/University Division Dr. Julie Angle- Oklahoma State University

The Jack Renner Award Gaile Loving- Mustang Public Schools

A Special Thanks To



The University of Central Oklahoma



THE SCIENCE STORE

NSTA has activated a PROMO CODE for the OSTA Fall Conference. This code **OKSMGB** will apply to all gear items in the NSTA Science Store. **The code will be active until Friday November 30th.**

Instructions:

- Sign into NSTA Science Store
- Choose items
- At checkout enter the PROMO CODE **OKSMGB**

OSTA would like to thank The Oklahoma Energy Resource Board (OERB) for their support of the 2013 OSTA Awards Reception

