Outdoor Learning Symposium

Your Lucky Day!

November 12-13, 2015
Fortson 4-H Center, Hampton

SCHEDULE

THURSDAY, NOVEMBER 12 - Optional Workshop
6:00 - 10:00 STEM Under the Stars - Make Your Own Star Lab at Fortson 4-H Center, Hampton

FRIDAY, NOVEMBER 13 - The Symposium
8:00 - 8:30 Morning Nature Meditation
8:30 - 9:00 Registration
9:00 - 9:35 Opening Remarks: Welcome & Outdoor Learning Talk (OL) #1
9:35 - 10:00 Networking in Exhibit Hall
10:00 - 12:00 AM Concurrent Sessions
12:10 - 12:25 OL Talk #2
12:25 - 1:15 Lunch
Superstitious Obstacle Course
1:15 - 1:30 OL Talk #3
1:40 - 2:35 PM Concurrent Sessions
2:45 - 3:30 OL Talk #4
Group Make & Take
Closing remarks
3:30 - 4:00 Ask the Council

ABOUT THE OUTDOOR LEARNING TALKS

Each year the Council of Outdoor Learning receives numerous call and emails around several common themes. This year we’ve decided to utilize a few minutes throughout the day to address these common concerns, misconceptions, and clarifications. We’ve assembled a team of experienced outdoor learning facilitators to present mini-sessions to address the topics we most often get asked about. If you have any additional questions about OL creation, utilization, maintenance, or sustainability, our team will be available at the end of the day to answer your questions.

THREE TRACKS:
- Taking STEM Outdoors
- Techniques & Strategies for OL
- Creating Sustainable OL Areas

GRADE LEVEL:
- ES Elementary School
- MS Middle School
- HS High School
- VA 4th grade and higher
- AA All Ages

THE COUNCIL OF OUTDOOR LEARNING IS A COMMITTEE OF THE ENVIRONMENTAL EDUCATION ALLIANCE OF GEORGIA
**A HUMDINGER OF A DESIGN CHALLENGE!**  
*Kim Bailey, EEinGeorgia*

After learning more about the feeding habits hummingbirds and studying the characteristics of flowers specially adapted for pollination by hummingbirds, students will draw inspiration from nature to design and create an artificial flower full of nectar - a hummingbird feeder! As part of the design process, students will consider critical questions including Will the birds hover and/or perch to feed; will the nectar be stored above (gravity fed) or below feeding holes; how can ants, bees, and wasps be prevented from accessing the nectar; how will the feeder be hung; how can the feeder be cleaned. Ideas for how to use the feeders in inquiry-based outdoor classroom investigations will also be shared.

**13 ELEMENTS OF OUTDOOR LEARNING**  
*Jerry Hightower, United States National Park Service*

Join Naturalist and Environmental Educator Jerry Hightower for a look at thirteen components that could enhance your outdoor learning areas. These are easy, low cost suggestions that could make your outdoor learning spaces more attractive to your students, more attractive to wildlife, create more opportunities for learning, and create more opportunities for strengthening social growth. This session will be open discussion and open for all questions.

**HEALING MEDICINAL PLANTS**  
*Anne Shenk, State Botanical Garden of Georgia*

Native plants of the Southeastern forests have been used for hundreds of years to treat common ailments. In this session we will investigate the properties of medicinal plants through hands-on science experiments including paper chromatography. A role play and discovery hunt will focus on uses of medicinal plants as well as on the consequences of over collecting medicinals in the wild. Shenk will also demonstrate making herbal products for a medicinal first-aid kit including herbal salves, sprays, capsules, tinctures and teas.

**HELGRAMMITES & WATER ZOMBIES**  
*Mike Kahle, Cobb County Water System*

Welcome to the underworld habitat of scrapers and shredders where leaf packs, riffles, vegetative margins, and woody debris create the perfect setting for a hands-on learning adventure. Aquatic macroinvertebrates are excellent indicators of water quality. Learn to identify, determine stream health, and categorize aquatic organisms by their levels of tolerance to pollution. Introduce your students to these fascinating water organisms with an in-class lab activity, then head outdoors for a water monitoring field trip to a local stream or pond. Data collected from this activity can be entered into the Georgia Adopt-A-Stream statewide database.

**A LITTLE WATER GOES A LONG WAY**  
*Michael Bush, Pioneer RESA*

Students will investigate ways to conserve water in the garden and grow healthy plants during near-drought conditions, test and compare the effectiveness of different techniques (using math along the way) and implement at least one best practice in a school garden. Students will work in teams to design and build a system to move water from one source to two different delivery areas. The challenge is to move two cups of water for at least three feet and distribute it evenly in two separate containers.
CLIMATE CHANGE IN THE SOUTHEASTERN CLASSROOM
Jan Kent, Columbus State University
This new Project Learning Tree secondary module was developed to help educators in the Southeast teach about climate change impacts on forest ecosystems, the role of forests in sequestering carbon, and strategies for reducing greenhouse gas emissions and adapting to changing climatic conditions.

TOP 10 MYTHS OF GRANT WRITING (AND HOW TO CORRECT THEM)
Rochelle Dennis, Beak Consulting
Grant writing is a specialized skill that can supplement and enhance projects and programming. This workshop is designed to provide basic information and skills in grant writing, with an emphasis on prospecting tips to help identify foundations, corporation and government grant programs, and how to approach different kinds of grant makers. Participants will learn how to avoid common mistakes applicants make, and develop realistic objectives, activities and budgets.

RED SKY IN MORNING...WARNING
Lisa Naliwajka, Holly Springs STEM Academy (Cherokee County School District)
Session will incorporate hands on weather lessons with simulations, design challenges, and real world science applications.

SCHOOLYARD ORCHARDS
Robby Astove, Dekalb County - Arabia Mountian
Fruit trees are a great investment for the outdoor classroom, learning garden, and the entire school grounds. Intended to feed, teach, and inspire—come learn why fruit trees are important, how to plan an orchard project, and which species are ready to harvest during the school year. In our workshop, we'll gain a deeper understanding of orchard design, implementation barriers, fruit tree ID, and the best practices to ensure the trees live long and reward you with a snack......

THE TREE CONNECTION
Liz Cole, Senior Project Manager GreenbergFarrow
“Climb out on a limb…That’s where the fruit is.” - Anonymous
What happens when you give 43 lower and middle grade students a tree sapling and a journal; introduce them to artists, design and environmental professionals; and take them to locally protected conservation lands? Magic… simply magic! Hang-on to your seat as you experience “The Tree Connection”, an interactive community based initiative that connects people, culture and the natural environment.

ADOPT A STREAM: A STEM DREAM
Kim Carden and Karen Stanfield, Cowan Road Elementary School (Griffin-Spalding County School System)
Learn how the Adopt-A-Stream program can become an exciting outdoor STEM project for your students. Adopt a Stream water quality monitoring can help meet standards related to ecosystems, chemical/physical properties and changes in matter, microorganisms, invertebrate studies, data collection, and more. Join us to learn how this real world, hands on experience will engage learners in meaningful projects that benefit your community and students!
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| 11:05-12:00  | ES                        | **THE POWER OF PLAY**  
Cora Keber, The State Botanical Garden of Georgia  
“You can discover more about a person in one hour of play than you can in one year of conversation.” --Plato  
Spend this one hour with Cora Keber, Education Coordinator at The State Botanical Garden of Georgia, and PLAY! What better way to introduce educational concepts than through stepping outside of the box and onto a stage. She will introduce a variety of ways to incorporate play into your lessons. Whether it be through song, theater, story time or puppetry these entertainment strategies can engage the imagination to places outside of the four walls and into a place of magic. |
| 11:05-12:00  | ES                        | **warts, toads, and other literary curiosities**  
Karen Garland, Clark Creek Elementary School (Cherokee County School District)  
Fingers crossed that “wild authors” will be able to unearth their imaginations and explore their creativity in a variety of genres in this hands-on session. Enjoy the many treasures nature has to offer and how they can spark theme-based lessons that can inspire our next generation of earth keepers. |
| 1:40 - 2:35  | ES                        | **Dispelling the Math Curse**  
Lauren Rodriguez and Virginia Scialpi, Clark Creek Elementary STEM (Cherokee County School District)  
Based on the children’s book, Math Curse, "You know almost everything in life can be considered a math problem." Therefore, explore the outdoors with us as we banish math boredom with a variety of hands-on activities from measuring an acre to using math to estimate how much oxygen a tree produces. |
| 1:40 - 2:35  | AA                        | **Demystifying ATEEG Certification – Inquiring Minds Want To Know!**  
Program Graduates, Advanced Training for Environmental Education Program in Georgia (ATEEG)  
Join ATEEG graduates as they share their experiences with this nationally accredited certification program. Discussions will include an overview of ATEEG program, sharing of their Independent Study Projects, and a reflection on the process of becoming ATEEG certified educators. |
| 1:40 - 2:35  | ES                        | **Get All Wet in the Rainforest!**  
Jo Adang and Monica Kilpatrick, Georgia Project WET  
Participants will be transported to the rainforest where they will be enveloped by the sounds and rhythms of rain falling through the canopy onto the damp forest floor by making their own Rainstick instrument. We will explore myths and legends around the world’s rainforests and learn how Project WET activities can enhance the study of weather and other aspects of water on Earth. |
| 1:40 - 2:35  | ES                        | **Want Honey?**  
Zeb Brown, Henry County Water Authority  
Interested in learning about beekeeping? This honey bee education session will provide information on pollination, types of bees, hive structure, equipment, and honey collection. |
| 1:40 - 2:35  | AA                        | **All That Glitters – Georgia Rocks!**  
Bill Witherspoon, georgiarocks.us; Pamela Gore, Georgia Perimeter College  
Students will best engage in Earth science in the outdoors if local rocks and minerals are first brought into the classroom. Next, take students to the rocks in a local park or nearby streamed. The authors of Roadside Geology of Georgia, the popular guidebook to the Earth science behind Georgia’s favorite outdoor destinations, share tips on discovering the rocks, minerals, and geology of your local area, and getting the most out of geology locations all over the state. The program includes hands-on use of Kids RockTM sets (georgiarocks.us/games) to learn your local rocks in minutes. |
**NEVER FEAR NEXT GENERATION SCIENCE: TRANSITIONING TO THREE-DIMENSIONAL LEARNING AS THE FOUNDATION FOR OUTDOOR STEM**

Jeremy Peacock, Northeast Georgia RESA

Outdoor science learning is all about engaging students in doing science and thinking science and not just learning about science. Wouldn’t it be great if students’ classroom experience mirrored that approach? Well, that is exactly the direction Georgia science education will take as we move closer to the three-dimensional learning called for in A Framework for K-12 Science Education and the Next Generation Science Standards. This workshop will engage you in an outdoor lesson that integrates content with science & engineering practices and crosscutting ideas. Learn how those three dimensions can provide a foundation for meaningful outdoor STEM learning that connects science to engineering, math, technology, and literacy.

**PBL WITH A PURPOSE**

Karan Wood, Captain Planet Foundation

Engaging students in environmental stewardship empowers them to make a difference in the real world. Check out five fun projects that incorporate STEM learning, collaboration, creativity, and the iterative design process.

**WILL FOUR-LEAF CLOVERS BRING POLLINATORS TO YOUR GARDEN?**

Susan Meyers, Monarchs Across Georgia

This is not a matter of luck; it’s a matter of planning. Knowing which host and nectar plants to install in your landscape to create a healthy pollinator habitat is key. Discover the criteria for Monarchs Across Georgia Pollinator Habitat Certification and the multitude of citizen science projects that can be incorporated into student learning in this outdoor space.

**RED TOUCHES YELLOW, DANGEROUS FELLOW**

Fortson 4-H staff, Fortson 4-H Center

Participants get the opportunity to handle, observe and learn about reptiles and amphibians. Characteristics and adaptations of snakes, turtles, lizards, frogs and more will be discussed. Many of the misconceptions about these beneficial, but often misunderstood, animals will also be dispelled.

**STEM UNDER THE STARS**

Karen Garland, Clark Creek Elementary School (Cherokee County School District)

Want a star lab for your school? Join us Thursday evening for the pre-symposium workshop and we’ll teach you how to make your own without spending thousands. Weather permitting, we will also head outdoors to look at the night sky. Participants will receive curriculum to supplement the star lab experience.

COST: $25

For more information or to register, visit [www.eealliance.org/outdoor-learning-symposium](http://www.eealliance.org/outdoor-learning-symposium). Registration deadline is Friday, October 30, 2015.
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