



*Arkansas Environmental Education Association's*

# ***STE<sup>2</sup>M to the Next Gen***

***2018 Environmental Education Expo  
Registration Packet***



***Mount Magazine State Park***

***June 11-12th***

*Call 501-773-1107 or email—[info@arkansasee.org](mailto:info@arkansasee.org)—for questions*

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### Monday, June 11th Pre-Conference Hikes PLUS Networking Event

#### Dr. Varnell's Guided Geology Hike, 2:00 — 4:00 PM

Science Specialist Dr. Curtis Varnell will lead a geology hike of the Bear Hollow trail which has lots of information on the history, geology, and even some biology of Mt. Magazine. Participants will experience unique geology—a palisade wall, bottomless pit (80-110 ft. deep), observable fault lines, and springs—along the hike. The trail is very scenic, yet rough and not as commonly used. Eligible for 2 hours of ADE-approved professional development.

#### Wendi J. Williams' Accessible Trail Opportunity, 4:30 — 5:15 PM

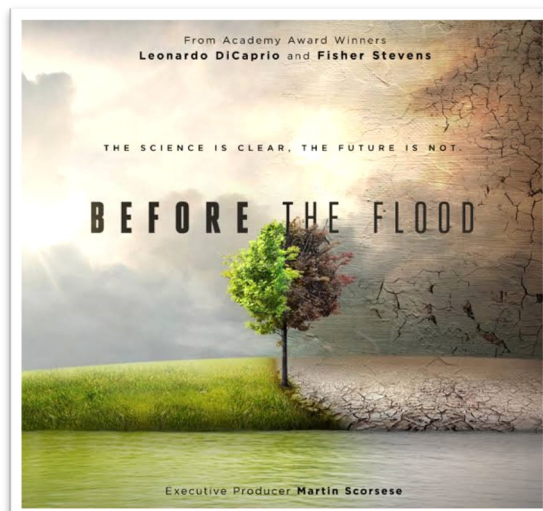
Join Wendi J. W. Williams for a Universal/Inclusive Design-informed guided experience along a trail atop the summit of Mount Magazine. She will model accessibility opportunities for outdoor experiences designed for diverse learners with varying abilities. Meet at the parking lot for The Lodge at Mount Magazine and take in the beautiful view of Arkansas's highest natural point. This activity is eligible for .75 hours of ADE-approved professional development.

**PLEASE BRING A WATER BOTTLE—AEEA WILL PROVIDE A LIGHT SNACK.**

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AEEA will host a Board-catered dinner and networking event at the park pavilion from 6:00-8:00 PM Monday evening, followed by screening of the documentary BEFORE THE FLOOD.

*BEFORE THE FLOOD presents an engaging account of how society can prevent the demise of endangered species, ecosystems and native communities across the globe. Leonardo DiCaprio interviews individuals from every facet of society in both developing and developed nations who provide unique, impassioned and pragmatic views on what must be done today to transition our economic and political systems into environmentally-friendly institutions.*



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### *Tuesday, June 12th Session Descriptions*

*Keynote Address by Wendi J. Williams*  
*“Universal Design Strategies to Broaden*  
*Environmental Education Access”*

#### *Breakout Session 1*

##### **FLY AWAY WITH POLLINATORS**

Melissa Lombardi & Becky Hays, U.S. Fish & Wildlife Service

Learn more about engaging ways to teach the value of pollinators at multiple age levels. We'll provide tangible and online resources and practical hands-on activities for the classes and other groups that can be easily incorporated into existing plans. Participants will receive several individual or classroom pollinator projects for kids, and will make at least one of these projects to take home. Information presented in this workshop will complement discussions in K, 2nd, 3rd and 7th grade.

##### **NATIVE EDIBLE PLANTS GUIDED WALK**

Dr. Lora L. Shadwick, Dept. of Biological Sciences -  
University of Arkansas

A guided hike from Mount Magazine conference center along Signal Hill Trail will focus on Native Edible Plants. We will walk slowly over moderate terrain and look at plants. Participants are more than welcome to share their own knowledge of native edibles with the group. Feel free to bring an ID guide with you and a magnifying glass or loupe if you want. Printed handouts with plants that we are likely to encounter will be provided. Please wear sturdy, comfortable shoes and protection from insects, sun, rain etc. as needed to make yourself comfortable outdoors.

##### **PROJECT LEARNING TREE'S NEW E-UNITS CURRICULUM**

Rob Beadel, Arkansas Project Learning Tree

Join PLT State Coordinator & AEEA Board President Rob Beadel for an overview of PLT's new e-units. Project Learning Tree's (PLT) E-units are self-contained units of instruction that are fully online. These multi-disciplinary lessons are designed to be

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easy for teachers to access and use. Each e-unit is constructed around—rather than simply correlated to—targeted performance expectations of the Next Generation Science.

### ***Breakout Session 2***

#### **GENDER GAPS IN STEM EDUCATION: BOYS TEND TO BENEFIT FROM OVER-CONFIDENCE IN MATH**

Lina Anaya & Gemma Zamarro, University of Arkansas

Despite STEM fields having a promising future, women's participation in certain STEM studies and jobs continues to be low. Research suggests that this issue has its origins in elementary school. Boys exhibit higher levels of self-confidence and perform better in math than girls during elementary school ages and this increases their chances of achieving a STEM degree and occupation. However, our research also shows that there are other factors that could be discouraging girls from closing this gap. We propose to share these results and discuss potential ways to encourage girls to develop self-confidence in their math skills and interest in STEM fields.

#### **PREDATORS, NOT PETS**

Beckie Moore & Hannah Wherry, Turpentine Creek Wildlife Refuge

What do lions, tigers, and leopards all have in common? They are all big cats that deserve to remain in the wild, but sadly, due to the exotic pet trade, they become pets. There are more tigers in backyards in the United States than left in the wild today. Turpentine Creek Wildlife Refuge has been rescuing abandoned, abused, and neglected big cats & bears for 25 years. Join Wildlife Interpreters Beckie and Hannah as we discover more about the exotic pet trade and how you can help protect the future of big cats.

***Board-Catered Lunch & AEEA Awards Ceremony***  
***Winners of the Formal Educator of the Year,***  
***Non-formal Educator of the Year,***  
***& Robert McAfee Award will be honored***

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### *Breakout Session 3*

#### **USING iNATURALIST TO ENGAGE COMMUNITY & DOCUMENT BIODIVERSITY**

Sim Barrow, Northwest Arkansas Land Trust

iNaturalist is an online social network dedicated to connecting people to nature by sharing biodiversity data. Conservation organizations and environmental educators can use this platform to engage their audience in outdoor exploration while gleaning useful biodiversity data. This hands-on workshop will demonstrate how the NWA Land Trust is coordinating volunteers to collect biodiversity data on its conserved properties, and will conclude with a hands-on demonstration of how to begin using iNaturalist.

#### **SNOCAT: SAVING NATURE ONE COUPON AT A TIME**

Tom Krohn, Arkansas Frog Watch

The SNOCAT - Saving Nature One Coupon at a Time - program provides a bridge to nature for kids. SNOCAT consists of coupon booklets for pre-teens in 3rd to 6th grade to complete with the help of their parents. Each age-specific booklet contains 16 activity coupons covering various helpful environmental actions. Challenges can be arranged for classrooms, scout troops, home schools, library programs, state parks, environmental groups, and others. This presentation will provide the attendee with everything they need to start a local SNOCAT Challenge as well as a Q&A with a teacher who is successfully using this program.

#### **LEADING A GUIDED HIKE**

Jay Schneider, Hobbs State Park

The guided hike is a staple in an interpreter's tool box. Are we creating memories with each hike we give and leaving them inspired and wanting more? We will share and learn the techniques, tips and success stories of a guided hikes, that will help you connect your visitors to your resource, whether planned or on a moment's notice. Please bring sunscreen, water and bug spray, and wear comfortable walking shoes.

*Mount Magazine State Park is on the state's tallest mountain, the 2,753-foot Mount Magazine. Sweeping vistas of broad river valleys, deep canyons, and distant mountains welcome outdoor enthusiasts to Arkansas's highest point.*

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### *Breakout Session 4*

#### PROTECTING MARINE ENVIRONMENTS USING UNDERWATER ROBOTICS

Kamryn Baker & Jessica Anders, Southern Arkansas University

Learn about the importance of teaching robotics to middle & high school students to emphasize future STEM career opportunities, and, along with this, bring attention to the growing use of underwater robotics in regards to monitoring marine environments. Underwater robotics is a new and emerging focus in the environmental sector that has the potential to be life changing to both students and our marine ecosystems. This session includes a demonstration with an underwater robot to illustrate just how much fun STEM can be!

#### STEM IN THE K-4 CLASSROOM

Stacey Light, Leverett Elementary School

Who says STEM is just for big kids? Enjoy a hands-on experience that promotes environmental engineering practices using Arkansas Science Standards and project based learning. Attendees will be introduced to STEM lessons for Kindergarten and 3rd grade by participating in problem solving activities that can be used in any elementary classroom.

### *Breakout Session 5*

#### PHENOMENA-BASED 3-DIMENSIONAL INSTRUCTION: EROSION BY WATER, FROM DROP TO DELUGE

Dot Neely, Beaver Water District

Desktop water erosion bins model planet-scale processes and patterns in this hands-on classroom example. Participants will engage in phenomenon-based 3-D science learning that may be modified to be age appropriate and suitable for all grade levels. The lesson is designed to be inquiry-driven as students ponder, discuss, pose, and note questions about the impacts of water of varying volumes and velocities and then observe and describe effects.

[Click here to learn more about the cultural history of Mount Magazine](#)

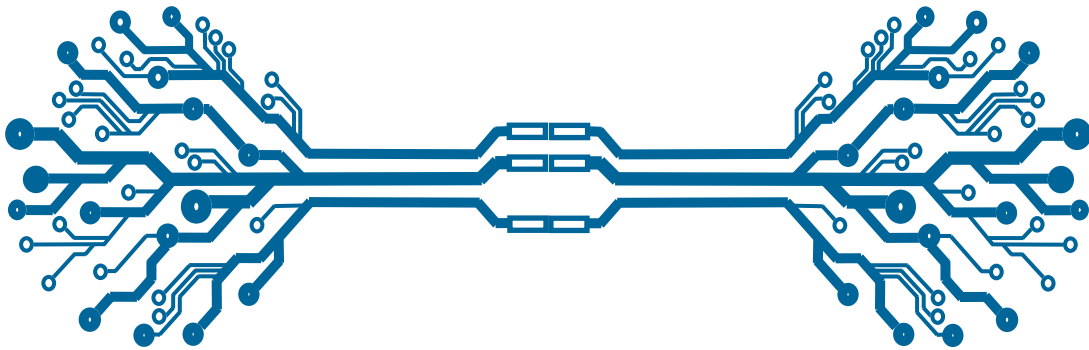
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### LOWERING HUMAN IMPACT ON THE ENVIRONMENT BY USING LESS GASOLINE

Shawn Bell, University of Arkansas STEM Center

Explore energy transfer and transformation through science phenomena, reflection instructional strategies, and make connections to the new Arkansas K-12 Science Standards. Participants will learn how to apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.



### *Expo Keynote Speaker—Wendi J. W. Williams, Ph.D.*



Wendi J. W. Williams has combined childhood outdoors experiences to find a vocation allowing her broad-ranging interests to become a way of including others through STEAM education. She is a geoscience faculty with Northwest Arkansas Community College and University of Arkansas at Little Rock, and formerly an Education Director with Ozark Natural Science Center. The first female to go to college in her family, Wendi reflected on early family travels related to Air Force relocations, such as swimming in the Sea of Japan off Guam (being sure to dodge stinging Portuguese Man O'War), that led her to earn a Geosciences doctorate. Ultimately calling Arkansas (above and below ground) her family's home, Wendi has adopted the use of Universal / Inclusive Design for formal and informal education efforts directly with students and to train others.

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Name \_\_\_\_\_

Job Title \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

E-mail \_\_\_\_\_

DR. VARNELL'S HIKE ELIGIBLE FOR 2 HOURS PD — DR. WILLIAMS' HIKE ELIGIBLE FOR .75 HOURS PD — TUESDAY SESSIONS ELIGIBLE FOR 6 HOURS PD

- Dr. Varnell's Monday Pre-Expo Hike - Members FREE     \$5.00 Non Members
- Dr. Williams' Monday Pre-Expo Hike - Members FREE     \$5.00 Non Members
- Monday Evening Guest - \$10.00 Suggested Donation at Networking Event
- Conference Registration - \$40.00 Members
- Conference Registration - \$55.00 Non Members

Includes Monday Eve  
Networking Event &  
Tuesday Lunch

Lunch and snacks will be provided during the event. If you would like to request a special dietary option for the meals, please check below:

*Vegetarian*

*Gluten-free*

The Mt. Magazine Lodge has reserved a block of rooms at a discounted rate for conference attendees. Don't forget to mention this when making your reservation.  
TO BOOK, CALL (877) 665-6343.

**REGISTRATION FEES DUE JUNE 1ST, 2018**

MAIL YOUR CHECK OR PURCHASE ORDER TO:

AEEA Expo Registration  
P.O. Box 1439  
North Little Rock, AR 72115



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### Expo Sponsors



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*Voice of Forestry*



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