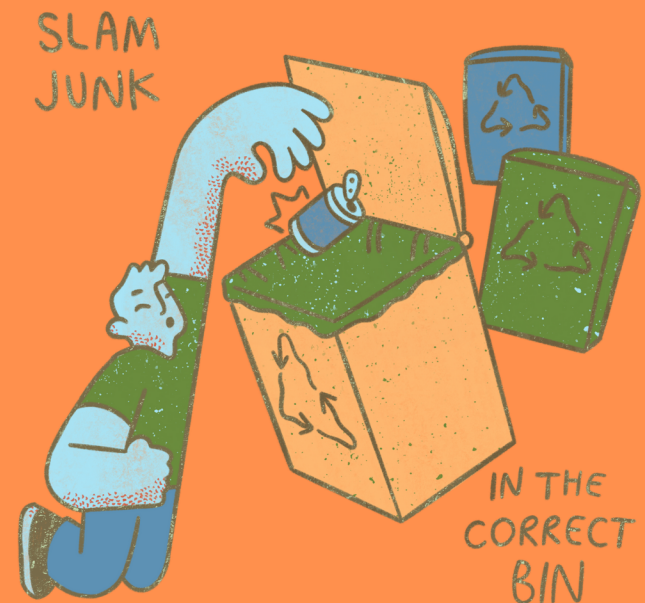


25th OKLAHOMA ENVIRONMENTAL EDUCATION EXPO

USE LESS BY LEARNING MORE



FRIDAY, FEBRUARY 2, 2024

Oklahoma City Zoo
Rosser Conservation Education Center
2000 Remington Pl., Oklahoma City, OK 73111



25th Annual Oklahoma Environmental Education Expo

EXPO AGENDA

- 8:30 Registration & exhibits
- 9:00 Opening Session - Announcements & Introductions by OKAEE Board
- 9:15 Keynote Speaker – Dr. Rebecca Snyder
- 10:00 Break and Exhibits
- 10:15 Concurrent Session 1
- 11:00 Break and Exhibits
- 11:15 Concurrent Session 2
- 12:00 Lunch, Networking and Exhibits
- 1:00 Concurrent Session 3
- 2:00 Exhibits and Break
- 2:15 Conservation at the Zoo – Explore the new Expedition Africa
- 3:00 Closing Session -Door prizes!
- 3:30 Dismissal

KEYNOTE ADDRESS

Dr. Rebecca Snyder is the Senior Director of Conservation, Education, and Science at the Oklahoma City Zoo and Botanical Gardens and has been with the Zoo for seven years. Prior to this she worked for Zoo Atlanta for 20 years in curatorial and research roles and supervised a multiyear research program on giant pandas in China. In her role with OKC Zoo, she manages wildlife conservation partnerships locally and globally, guides education programs to foster emotional connections with animals and inspire conservation action, conducts research on animal behavior, mentors students and postdocs, and leads animal wellbeing and sustainability initiatives.



She graduated from Iowa State University with a B.S. in zoology and from Georgia Institute of Technology with an M.S. and Ph.D. in experimental psychology. She has authored over 35 scientific publications, taught courses on animal behavior at Georgia State University, and was an associate editor for the Journal of Applied Animal Welfare Science.

Dr. Snyder is Chair of the Association of Zoos and Aquarium's (AZA) Giant Panda Conservation Foundation, was Chair of the AZA Bear Taxon Advisory Group for five years, and serves on the steering committee of the AZA Monarch SAFE program. She helped found the Oklahoma Monarch and Pollinator Collaborative (a.k.a. Okies for Monarchs) and served on the advisory board for biology at the University of Central Oklahoma.

She and her husband, Dr. Dwight Lawson, met at Zoo Atlanta and have been married for 17 years. They have a teenage daughter, Rory, who shares her parents' love of animals. Rebecca loves making her daughter laugh, snuggling her dogs, reading, spending time with friends and family, and travel—with a long list of countries she still wants to visit. She does not love running but has done it most of her life anyway.

Concurrent Session Schedule At-a-Glance

	Auditorium	Classroom 3	Classroom 4
Session 1	Evidence-based strategy for framing Climate Change Messaging	"Mind Blowing Wind Energy"	Understanding your Personal Energy Consumption
Session 2	Teach climate science with hope and optimism in Oklahoma	Lightning Talks: * Oklahoma County 4-H Outdoor Adventure * Learn how to make garden seed bombs * Monarchs and milkweeds	Hands-on, School-wide STEM learning in Conservation Agriculture.
Session 3	How ChatGPT and AI can revolutionize school gardening projects	Where is Away?	Trees & Me for Early Childhood
	Discovery Theater	Tree House	
Session 1	EcoRise: Exploring Water Use - Eco Auditors, Grants and more!	What Can you Find Under a Rock?	
Session 2	Recycling our Animal Enrichment	What if Darwin Had a Smartphone?	
Session 3	Drive-thru Soil Laboratory	Place-based Learning - Connecting Students to Nature	

Early Childhood
Elementary
Secondary
All Grade Levels



Our mission is to support Oklahoma educators and promote, in formal and non-formal settings, environmental literacy through communication, resource sharing, skill building, program sponsorship and recognition of excellence.

The Oklahoma Association for Environmental Education was established in 1993 and is the state affiliate of the North American Association for Environmental Education (NAAEE). OKAEE brings together a variety of environmental educators who share a common goal – excellence in environmental education. OKAEE serves educators of all grade levels, natural resource professionals, students, university faculty, environmental clubs, non-profit educational programs, and corporate environmental interests. OKAEE unites these diverse interests in a forum designed to energize and inspire participants to greater levels of achievement.

OKAEE accomplishes many of its goals by hosting a one-day conference, the Oklahoma Environmental Education Expo (EE Expo). The first EE Expo was held in February 1996, and 2024 marks the 25th EE Expo.

The activities and day-to-day operations of OKAEE are organized and carried out by a eight member Board of Directors. Board members are all volunteers. As in most not-forprofit organizations, OKAEE is constantly seeking new board members. We would love for you to join us.

For more information about OKAEE, please contact Tony Pascall at: anthony.pascall@ag.ok.gov or (405) 521-2020



Session Descriptions

Title	Summary	Presenter Name (s)	Organization/Affiliation	Grade Level	Room Assignment	Session Assignment
Evidence-based strategy for framing Climate Change Messaging	Since climate change is often a polarizing topic in Oklahoma, messaging about climate change causes, effects, and solutions can be very daunting for teachers. The National Network for Ocean and Climate Change Interpretation (NNOCCI) has partnered with the FrameWorks Institute to conduct research about effective interpretive techniques for addressing climate change messaging. Their research has resulted in the development of proven communication techniques that can help bring about real change for our environment. My presentation will include a basic overview of the NNOCCI organization, available training options, and the basic fundamentals of their recommendations for framing climate change communication. Participants will have an opportunity to practice framing basic messages that they can use with their students and to practice reframing their messaging when faced with polarizing questions.	Melissa Kesler	Oklahoma City Zoo	Middle School High School	Auditorium	Session 1
"Mind Blowing Wind Energy"	Let's test your critical thinking skills and knowledge of historical and current Oklahoma agriculture practices in this brand-new breakout box created entirely around windmills, wind turbines and wind energy. Originally designed for 4th grade, these boxes will have students in all grade levels wanting to give it a try! Never done a breakout box with students? No worries, you will be guided through the entire process of how to create such clues that can teach whatever concept you have! Participants will learn how to incorporate critical thinking skills through the use of "Escape Rooms/Breakout Boxes". By using clues and strategies, participants are given a mission to find the key to solve the Oklahoma agriculture mystery. "Breakout boxes" are tools that can help students work toward their learning goals, as it is a challenge that allows them to work together while solving a variety of puzzles. Using teamwork and critical thinking skills to think outside the box, they find "breakout boxes" to be interactive and fun.	Debra Wood	Edmond Public Schools	Kindergarten -5th Grade Middle School	Classroom 3	Session 1
Understanding your Personal Energy Consumption	It is imperative that as energy consumers all of us have a deep understanding about energy choices and costs of those choices to the environment. In this lesson students will learn about the impact that our energy use has on wildlife, their habitat, and ecosystems.	Tara Barker, Doug Weirick, Jane Cronin	Oklahoma Renewable Energy Education Program	Kindergarten -5th Grade Middle School	Classroom 4	Session 1
EcoRise: Exploring Water Use - Eco Auditors, Grants and more!	In our dynamic workshop, educators will immerse themselves in a unique learning experience by donning the role of student eco-auditors. Through hands-on exploration, participants will conduct eco-audits to observe and analyze water usage in their specific locations. This immersive process serves as the foundation to support students in designing compelling grant proposals aimed at addressing sustainability challenges identified during the audits. The heart of the session lies in guiding teachers through creating a driving question for their grants, drawing inspiration directly from their observations. This pivotal step ensures that the proposed projects are not only rooted in real-world data but are also tailored to the specific needs of their educational settings.	T Larson, Abby Randall	EcoRise	Kindergarten -5th Grade Middle School High School	Discovery Theater	Session 1
What Can you Find Under a Rock?	Fast photo-scavenger hunt followed by an insect vs. bug activity & creating habitats talk including how to make a backyard leaf-litter winter home for bugs. Main Activity: making solitary bee houses with hand drills in small log chunks and recycled flower pots with Zinnea seeds.	Charlotte Wood- Wilson & Laura Wilhelm	Retired OKCU and Kaplan Early Learning Center	Preschool to 2nd Grade Kindergarten -5th Grade	Tree House	Session 1

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Hands-on, School-wide STEM learning in Conservation Agriculture.	Two educators share their vision, resources, and lessons for school-wide conservation agriculture, alongside extra curricular club work in an effort to empower other educators to engage in hands on, school wide STEM learning. From grants and fundraisers to community partnerships, this presentation will set up other teachers for a successful environmental program. We strive to make environmental education accessible, fun, and fulfilling.	Melodie Pennington, Emma Harris	Hamilton Elementary, Tulsa Public Schools	Kindergarten -5th Grade	Classroom 4	Session 2
Teach climate science with hope and optimism in Oklahoma	When teaching about our changing climate, it is easy to fall into despair and hopelessness. In this session, we will share ideas about how to bring hope and optimism into your teaching and we will share resources for teaching about climate in a way that empowers students with mitigation and adaptation solutions and gives them agency to take action. Participants will receive digital resources from a variety of sources for teaching about climate solutions through mitigation and adaptation.	Tony Pascall	Oklahoma Forestry Services	Middle School High School	Auditorium	Session 2
Lightning Talks: * Oklahoma County 4-H Outdoor Adventure * Learn to make garden seed bombs * Monarchs and milkweeds	The OK County 4-H Outdoor Adventure Program is designed to immerse our youth in natural settings, fostering healthy habits and providing valuable outdoor education. Recognizing the diverse skill levels within our community, this program accommodates differences by allowing participants to progressively build stamina through a series of tiered challenges. All youth are encouraged to participate, and see if this program is right for them. Recycled paper seed balls are simple, inexpensive to create, and a perfect hands-on approach to learning about recycling and gardening. Teachers are always seeking a craft that students can take home, give as a gift, or use to create their own beautiful garden. These pulp paper balls filled with seeds and are a perfect activity for the spring and summer. Milkweed is a vital component of the monarch butterfly lifecycle. Monarchs lay their eggs exclusively on milkweed plants, and the larvae (caterpillars) rely on milkweed as their sole food source. Come learn how to incorporate monarchs in the classroom, what the OKC Zoo is doing to help bolster milkweed habitat, and leave with your own milkweed seeds ready to germinate!	Cody Yount Debra Wood Emily Geest David Berman	Oklahoma County 4-H Edmond Public Schools Oklahoma City Zoo Oklahoma State Univ.	Preschool to 2nd Grade Kindergarten -5th Grade Middle School High School	Classroom 3	Session 2
What if Darwin Had a Smartphone?	This session will introduce participants to citizen science, including its common features and two citizen science projects—SEEK by iNaturalist and iNaturalist. Participants will take on an active role as learners to explore how these two citizen science projects allow students to make discoveries, share observations, and gather data in an authentic science context all while using their Smartphones. Additionally, participants will reflect upon the value of participating in citizen science projects and how they can empower students to engage with meaningful science experiences in and out of the classroom.	Teresa Randall	K-20 Center @ OU	Kindergarten -5th Grade Middle School High School	Tree House	Session 2
Recycling our Animal Enrichment	The Oklahoma City Zoo and Botanical Garden's animal enrichment program aims to enhance animal wellbeing by providing dynamic and stimulating experiences. Central to this initiative is a commitment to sustainability, achieved through the creative use of recycled and repurposed materials. This commitment is strengthened through impactful community partnerships. By collaborating with local organizations and businesses, we've implemented innovative recycling practices, repurposing materials to enrich the lives of our animals. This resource-conscious approach aligns with our broader commitment to conservation and environmental stewardship.	Heather Guillory	Oklahoma City Zoo	Kindergarten -5th Grade Middle School High School	Discovery Theater	Session 2



Session Descriptions

Title	Summary	Presenter Name (s)	Organization/Affiliation	Grade Level	Room Assignment	Session Assignment
Place-based Learning - Connecting Students to Nature	Place-based education practices have been found to increase students' connections with their communities and local ecosystems, and to be beneficial in engaging students firsthand in advocacy and action projects that benefit their local environments. In this session, I'll share some of the research findings about place-based education, and share 3 games popular with students in Forest School programs that can be used as part of any sustainable education curriculum or program.	Lori Ann Wilde	Prairiewood Forest School at St. Francis of the Woods	Kindergarten -5th Grade Middle School High School	Tree House	Session 3
How ChatGPT and AI can revolutionize school gardening projects	This presentation delves into the innovative integration of ChatGPT and AI in school gardening projects, tailored specifically for educators. Gardening, an effective hands-on learning tool, offers immense educational benefits, aiding in teaching biology, ecology, and environmental stewardship. The introduction of AI, particularly ChatGPT, transforms these gardening projects into interactive, dynamic learning experiences. The focus is on how ChatGPT can serve as a responsive educational aid, providing real-time information on plant biology, growth requirements, and sustainable gardening practices. This integration not only enhances the learning process but also streamlines the planning and management of school gardens. Teachers can use ChatGPT to develop lesson plans, engage students in Q&A sessions about ecosystems, and facilitate project-based learning activities like designing sustainable gardens. Additionally, the presentation will provide practical steps for teachers to implement AI tools in their classrooms, ensuring safe and age-appropriate use.	Andrew Sartain	Earth Rebirth	Preschool to 2nd Grade Kindergarten -5th Grade Middle School High School	Auditorium	Session 3
Drive-thru Soil Laboratory	The soil is the ultimate recipient and "treatment center" of most anthropogenic wastes. While the soil has an enormous capacity to treat wastes and attenuate pollutants, there is always the risk of overusing and/or misusing it, leading to the degradation of its properties. Proper understanding of the various processes and properties that affect the soil's ability to treat wastes and pollutants is of utmost importance so it can be properly utilized and its ability to perform this function can be sustained. This presentation is a demonstration of the delivery of a Basic Soils Drive-through Laboratory Activity that goes through the characterization of key soil physical properties and processes. A drive-through lab is a 30-minute laboratory session involving pre-prepared stations to demonstrate a procedure and/or explain a process. It is called "drive-through lab" because students don't sit down but instead move with the instructor through the various stations in the laboratory. A drive-through laboratory session is an approach to "using less" in terms of time, space, and effort to achieve learning about a series of interconnected topics.	Sergio M. Abit Jr.	Department of Plant and Soil Sciences, Oklahoma State University	Middle School High School	Discovery Theater	Session 3
Where is Away?	We use an item, we throw away the packaging and really never think about it again. But "away" is a myth. There is no "away". All of our trash goes somewhere. We can learn to be more conscious of the waste we produce and take steps to reduce that waste by switching to reusable, compostable, recyclable, etc. We will explore a modern landfill model and talk about landfill use in Oklahoma. We will also play a trash sorting game that will allow the participants to determine where each trash item should go (recycling, compost, household hazardous waste, beyond the bin, sell/donate/giveaway, or to the landfill). We will help to demystify the process and participants should leave feeling much more confident in their ability to reduce their waste.	Sara Ivey Keima Brosuah	Oklahoma Green Schools Program and OSU Extension - Solid Waste	Kindergarten -5th Grade Middle School High School	Classroom 3	Session 3
Trees & Me for Early Childhood	Trees & Me: Activities for Exploring Nature with Young Children includes 12 activities and more than 250 learning experiences for families and teachers to connect children ages 1-6 to nature, with a focus on trees. Through fun, indoor and outdoor activities, toddlers and preschoolers explore nature through their senses, experience trees throughout the seasons, and connect with their community. The hands-on activities are designed for families and caregivers, childcare providers, and early childhood or PreK-Grade 1 educators to use in a range of settings, including preschools, childcare and nature centers, and at home.	Tony Pascall Nikki Huckabay	Oklahoma Forestry Services Oklahoma State Univ.	Preschool to 2nd Grade Kindergarten -5th Grade	Classroom 4	Session 3

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Notes

