



Environmental Literacy: Success Through Partnerships

2016 TAE Conference

Northwood University

October 7–9, 2016

Keynote Speaker: Cal Martin, National Chair of Interpretation Canada



Welcome!

Location

Northwood University, Cedar Hill

1114 West FM 1382

Cedar Hill, TX 75104

The campus of Northwood University is a picturesque setting near Cedar Hill State Park in southwest Dallas County. The campus has access to wooded areas with trails, a creek bed, a bedrock road cut, a pond, sports field, outdoor seating areas and of course indoor classrooms with A/V capabilities.

Website: <http://www.northwood.edu/locations/texas-cedar-hill.aspx>

Lodging

TAEЕ is pleased to offer two lodging options. Northwood University has on-site housing in motel style rooms each with two beds, private bath and linens. You may choose single or double occupancy. If you choose double occupancy you may designate a roommate or TAEЕ will assign one. Two nights lodging with Saturday and Sunday breakfasts will be \$80 for double occupancy or \$120 for single occupancy. There is limited availability so register now.

Holiday Inn Express in Cedar Hill has offered a reduced rate for conference attendees; \$99.00 standard and \$119.00 king suite per night. Breakfast is included. **[Click here for a direct link to the hotel registration for the conference.](#)** If you call directly to reserve rooms, 972-291-4037, mention TAEЕ.

What to expect:

- A mixture of seasoned and new environmental educators
- Friday short courses, Saturday and Sunday plenary and breakout sessions
- Lots of socializing and networking with old and new friends
- Inspiration, and immediately applicable tools and ideas.

What to bring:

Water bottle

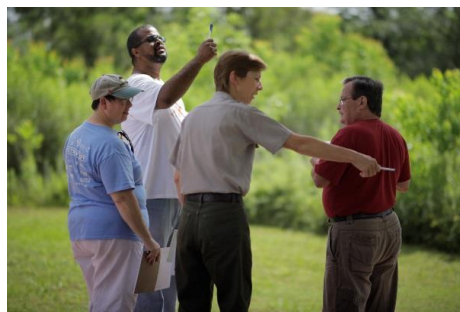
Comfortable clothes/shoes

Binoculars

Curiosity

Enthusiasm

Vision for what EE can be



Silent Auction: Educational and gift items will be up for auction. All proceeds support environmental education in Texas. Donations to the Silent Auction are appreciated. Bid often and bid high!

Book Sale: New and used books will be available for immediate purchase. Donations of environmental books, guides, curriculum, media, etc. are welcome. Restock your book shelves with new-to-you treasures.

Sponsorships and Donations

Whole Earth Provision Company <http://wholeearthprovision.com>

Native American Seed Company <http://www.seedsource.com>

Perot Museum of Nature and Science <http://www.perotmuseum.org>

Holman Pottery <http://www.holmanpottery.com>

Oriental Trading Company <http://www.orientaltrading.com>

The following are additional supporters of this year's event

Biodiversity Education Center <http://coppellnaturepark.org/center.php>

Dallas ISD Environmental Education Center <http://www.dallasisd.org/Page/863>

Dallas Zoo <http://www.dallaszoo.com>

Dogwood Canyon Audubon Center <http://dogwoodcanyon.audubon.org>

John Bunker Sands Wetland Center <http://www.wetlandcenter.com>

Plano Environmental Education Center <http://www.plano.gov/982/Environmental-Education-Center>

Social Networking

When you registered for the conference, you were asked to list two different topics you would like to discuss. These topics will be printed on your name tag to spark conversation among people.



You will have the opportunity to discuss those topics further over dinner at one of the many Cedar Hill restaurants. Sign-up sheets listing the topic to be discussed, the facilitator, and the restaurant will be located in the main meeting room. Sign-up for the discussion group you would like to attend. After the sessions conclude on Saturday you will meet the facilitator and carpool to the restaurant to begin a lively discussion with your fellow colleagues. Dinner cost is individual responsibility and was not included in registration fee. After dinner head back to Northwood University for a fun and entertaining evening program.

Keynote Address

Speaker – Cal Martin

Hearts First, Then Minds: Using Emotion to Connect People and Places

Simply put, environmental educators want to make a difference. Working towards this noble goal, staff often feel that “if people only knew more about (nature, environmental problems, etc...) they would behave differently.” Recent studies, however, show that knowledge about a subject is not necessarily connected to how much someone cares. In this inspiring presentation, Cal Martin will discuss this new thinking and make a passionate plea for educators to focus on emotional approaches to connect people and nature.

Cal Martin, principal of Frog in the Pocket, lives and breathes interpretation. For over 25 years, he has connected people and places through interpretive planning, programming, and exhibits. Ranging from front line interpreter to manager, Cal has worked for Parks Canada, Manitoba Provincial Parks, the Vancouver Aquarium, Assiniboine Park Zoo, and Metro Vancouver Regional Parks.

Thoroughly passionate about interpretation, he has presented at national and international conferences, and trained staff of over 100 museums, parks and sites. Cal has published articles in *Interpscan* and *Legacy* magazines, writes for the international interpretive blog Media Platypus, and co-edited *The Interpreter's Big Book of Disasters*. His work has been recognized through Interpretation Canada's Awards of Excellence and the National Association for Interpretation's Legacy Magazine Awards.

Cal has been on the National Executive Board of Interpretation Canada since 2003, holding the positions of Chair, Past Chair and Treasurer.

Saturday follow-up Session: Following the keynote presentation, we will explore specific elements of what makes experiences memorable. After a short presentation, we will open the floor to share professional experiences with this approach. If you are wanting more "nuts-and-bolts" in using an emotional approach, this session is for you.

Schedule

Friday October 7, 2016

- 9:00-5:00 Field Trip - The Dallas Zoo – free admission for TAEF Conference attendees
- 10:00-noon Short Course – Curriculum for a Crowded Planet
- 10:00 – 2:00 Field Trip –John Bunker Sands, includes lunch; \$12 preregistration required
- 10:00 – 6:00 Field Trip - Perot Museum of Nature and Science– free admission for TAEF Conference attendees
- 1:00-4:00 Short Course – Growing Up WILD; \$25 preregistration required
- 2:00 – 3:30 Field Trip - Plano Environmental Learning Center; \$4 preregistration required
- 3:00 – 4:00 Field Trip – Giants of the Savannah at Dallas Zoo; \$9 preregistration required
- 6:30 – 9:00 Social with Barbeque and S'mores at Dogwood Canyon Audubon Center

Saturday October 8, 2016

- 7:00-9:00 Early Morning Field Session - Leading a Successful Bird Walk, Shannon Love
- 7:30-9:00 Early Morning Field Session - Connections: Native Cultural Learning, Dwight Wilson
- 8:00 – 9:00 Breakout Sessions
- Carbon Cycle on the Move: Easy but Challenging Activities for the Middle and High School Classroom, Dawn Chegwiddden & Jim Manley
 - North Eules Outdoor Learning Area - A living outdoor classroom designed for Place Based Education, Scott Matula
- 9:15 – 10:15 Plenary Session – TAEF Success Through Partnerships
- 10:30-11:30 Breakout Sessions
- Easy Ways To Be Successful in the Science Classroom, Dawn Chegwiddden & Sharon Wood
 - The NEW Texas Association for Environmental Education: Vision 2017, Greg Wukasch
 - Volunteer Sources for Educational Events, Alisa Annette Kozlowski
 - Bucket Brigade: Reaching Further through Partnerships, Amanda Rinehart, Kendall Guidroz, Karla Klay
- 11:30-12:30 Keynote Address - Hearts First, Then Minds: Using Emotion to Connect People and Places, Cal Martin
- 12:30 – 1:00 Lunch
- 1:00-2:00 Breakout Sessions
- Interactive Graphic Organizers for the Science Classroom, Brian McLean
 - Answering the question, “So What?” to create those “A-ha!” moments!, David Owens
 - Keynote follow-up Session: What makes experiences memorable, Cal Martin
- 2:15-3:15 Breakout Sessions
- Texas Aquatic Science: From Molecules to Ecosystems, to Headwaters to Oceans Johnnie Smith
 - "Partnerships in Water Education" - Making Connections, Tracy Hollis & Sarah Grella
 - Cert 101: How to Become a Certified Texas Environmental Educator
Lisa Brown, Alicia Mein-Johnson, & Melissa Mullens
- 2:15 – 4:30 Breakout Session
- Building Cross-Sector Partnerships to Fund Green Student Innovation, Abby Randall, Christina Mirando
- 3:30-4:30 Breakout Session
- Flight of the Monarch Celebration, Mae Smith
 - San Antonio Water System Presents: After the Flush, Lynne Christopher & Alicia Mein Johnson
- 4:45 Silent Auction ends
- 5:00-6:15 Dinner
- 6:45 – 7:30 Social – “Sex in the Garden”, Master Naturalist Janet Smith
- 7:30-..... Social - weather permitting “walk-in” movie in outdoor amphitheater

Sunday October 9, 2016

Check out of Northwood rooms before noon.

8:30-9:30 Breakout Sessions

- GreenSchools: Empower Students to take Positive Environmental Action in their School & Community,
Misty Bowie
- Small-Scale Aquaponics for the Class,
Bryan Beck
- The Million Dollar Partnership - Volunteers!
Linda Dunn

9:00-11:00 Field Trip - Kayaking at Cedar Hill State Park

9:00-5:00 Field Trip - The Dallas Zoo – free admission for TAEF Conference attendees

10:00 – 11:00 Breakout Sessions

- Moving the “Plan” Forward!
Greg Wukasch

10:00 – noon Breakout Session

- Ethnobotany – Texas Wild Edible History and Walk,
Bob Richie

11:00 – noon Breakout Sessions

- STEAM Curriculum: Building Hands-on Learning for Kindergarten Students
Brenda Weiser, Dr. Jana Willis, & Terri Chvala
- Bridging Silos: Partnerships in Natural Resource Literacy in a Land of Private Property
Tom Arsuffi & Koy Coffer

Field Trips

Dallas Zoo



When: Friday October 7 or Sunday October 9

Time: 9 a.m. – 5 p.m.

Where: Dallas Zoo

Cost: Free

650 South R.L. Thornton Freeway (I-35E), Dallas, TX 75203.

Self-guided Zoo visit: With over 106 acres to explore including our largest exhibit, the Giants of the Savanna, the Dallas Zoo is the largest zoological experience in Texas! Our goal is to make your visit an exciting adventure with opportunities to learn about interesting wildlife, engage in interactive fun, and support worldwide conservation and research to protect and preserve endangered species.

Free to TAEF Conference Attendees

Sign up during registration. Visit anytime during the day and let them know you are there with TAEF

Dallas Zoo – Giants of the Savanna



When: Friday October 7

Time: 3 p.m. – 4 p.m.

Where: Dallas Zoo

Cost: \$9/person

Limit: 30 Participants (Minimum 10)

650 South R.L. Thornton Freeway (I-35E), Dallas, TX 75203.

What does it take to survive on the savanna? In this 60-minute guided tour, explore the Savanna and discover the specialized adaptations of the animals who call the Dallas Zoo's Giants of the Savanna home.

Register online during registration process

John Bunker Sands Wetland Center



When: Friday, October 7

Time: 10 a.m. – 2 p.m.

Where: John Bunker Sands Wetland Center

Cost: \$15, Includes Lunch

Limit: 25 Participants (Minimum 10)

655 Martin Lane, Seagoville, TX 75159

Join us at the John Bunker Sands Wetland Center, as we go through and participate in a water quality lesson, looking at biotic and abiotic factors in determining water quality. This lesson will be geared toward middle and high school grade levels. Time will be spent both indoors and in the field, so wear clothes for the outdoors and closed toed shoes. Lunch will be included on this trip. The John Bunker Sands Wetland Center is home to a 2000 acre man made wetland located in the middle of a 5000 acre cattle ranch. It is the largest water reuse project in the country, providing water to over 1.5 million North Texans. The Wetland Center is the educational component of the project and provides opportunities for research, education and wildlife observation.

Register online during registration process

Perot Museum of Nature and Science



When: Friday, October 7

Time: 10 a.m. – 6 p.m.

Where: Perot Museum of Nature and Science

Cost: Free

Museum of Nature and Science [2201 N. Field Street, Dallas, Texas 75201-1704](https://www.perotmuseum.org/)

Self-guided museum visit. With 11 state-of-the-art permanent exhibit halls to explore, there's no shortage of amaze-your-brain moments waiting to spark your interest in STEM subjects and careers. Every field trip to the Perot Museum is an adventure in discovery!

Sign up during registration. Visit anytime during the day and let them know you are there with TAAE

Plano Environmental Education Center



When: Friday, October 7

Time: 2 p.m. – 3:30 p.m.

Where: Plano Environmental Learning Center

Cost: \$4.00/person

Limit: 30 Participants (15 minimum)

4116 W. Plano Parkway Plano, TX 75093

90-minute Guided Tour of the Environmental Education Center, its gardens and the Nature Explore Classroom, plus a tour of the Plano Community Gardens (a short walk from the EEC). This activity will be outdoors, **please dress appropriately**. Remember sunscreen, sunhats, water bottles, and insect repellent in warm weather; jackets, hats and gloves in cooler weather. Long pants and long-sleeved shirts are highly recommended. **Sturdy, closed-toe shoes are required for safety. Participants without appropriate footwear will not be permitted to enter the garden."**

Register online during the registration process.

Dallas ISD Environmental Education Center



When: Sunday, October 9

Time: 9 a.m. – 12 p.m.

Where: Dallas Environmental Learning Center.

Cost: Free

Limit: 30 Participants (Minimum 12)

1600 Bowers Rd., Seagoville, TX 75159

Come explore the over 500 acres of beautiful Texas landscape at the Dallas ISD Environmental Education Center. Informal and formal educators will gain hands-on learning experiences and science lab ideas that can be implemented in the classroom. Through lab activities and meet and greet of various animals, workshop participants will learn about food webs and adaptations of organisms found in the pond ecosystem. Weather permitting, participants will have an opportunity to conduct pond water chemistry tests and seine a pond to collect and identify pond organisms. (In the event of inclement weather, alternative indoor activities will be planned.) Please dress for the outdoors. After the workshop, feel free to bird watch and hike our nature trails!

Register online during registration process

Kayaking at Cedar Hill State Park



When: Sunday, October 9

Time: 9 a.m. – 11 a.m.

Where: Cedar Hill State Park

Cost: \$20.00/person

Limit: Minimum of 10, Max.20

1570 W. FM 1382, Cedar Hill, TX 75104

Enjoy a relaxing morning kayaking at Cedar Hill State Park. No experience necessary to participate. All Equipment will be provided. Includes all equipment and park entrance fee.

Register online during registration process

Biodiversity Education Center



When: Sunday, October 9

Time: 10 a.m. – 12 p.m.

Where: Biodiversity Education Center

Cost: Free

Limit: 40 Participants (Minimum 5)

367 Freeport Parkway, Coppell, TX 75019

This tour will introduce participants to the Coppell Nature Park hiking trails as well as the Biodiversity Education Center (BEC). Participants will learn about the green features of the BEC and how it is used as a classroom for visiting classes that come to the park. The BEC was opened in April of 2014 and is administered by the City of Coppell.

Register online during registration process

Friday Short Courses

Hands-on Curriculum for a Crowded Planet - Human population pressures underlie so many environmental issues including climate change, biodiversity loss, water scarcity and pollution. Explore these connections in innovative, interdisciplinary activities that promote critical thinking and problem-solving skills across the curriculum. [Jennifer Riles, Population Education](#)

Growing up WILD Curriculum Training - Growing Up WILD is an early childhood education program that builds on children's sense of wonder about nature and invites them to explore wildlife and the world around them. After the 3 hour interactive training session attendees will leave with a complete Growing Up WILD curriculum guide containing 27 field-tested, hands-on, nature-based, ready-made thematic units and over 400 experiences in a full-color 11"x17" activity guide. **\$25.00 fee – preregistration required – online during the registration process.** [Rebecca Schumaker, Indian Trails Master Naturalist](#)

Sessions

Saturday

Leading a Successful Bird Walk - Guiding a bird walk may sound like a challenge if you are new to birding. On this walk learn how to create a successful bird watching experience as we learn clues that help to identify birds and discuss resources that are available to create walks that are fun and informative no matter your experience. [Shannon Love, John Bunker Sands Wetland Center](#)

Connections: Native Cultural Learning - Learn how the early native cultures connected to the environment around them and passed the information down to the next generation. We will discuss how this knowledge is still beneficial to us today. Dwight Wilson learned about nature through primitive skills, storytelling and studying Native American Elders and is able to share a unique perspective on environmental education because of his experiences. [Dwight Wilson, DW Associates](#)

Carbon Cycle on the Move: Easy but Challenging Activities for the Middle and High School Classroom - Most college students in the United States do not grasp the scientific basis of the carbon cycle--an essential skill in understanding the causes and consequences of climate change. This workshop will introduce participants to basics of the carbon cycle involving engaging activities as they learn how the carbon cycle, climate and the abiotic/biotic components of the environment influence each other. Using case studies, NASA visualizations, current research, and an interactive activities, participants will explore how living things on land, in soils, and in our oceans regulate the carbon cycle. [Dawn Chegwiddden, Lewisville ISD; Jim Manley, Coppell ISD](#)

North Euless Outdoor Learning Area - A living outdoor classroom designed for Place Based Education – Learn how an elementary art teacher and an ESL teacher used grants, donations, and volunteer work to transform a useless blank piece of land on their school's campus into a 4000+ sq ft outdoor learning area. We can't do it for you but we can tell you how we did it. There is no reason to reinvent the wheel. [Scott Matula, North Euless Elementary School, HEB ISD](#)

Easy Ways To Be Successful in the Science Classroom - If you teach Aquatic Science, Middle School Science, or Environmental Science, come and learn from two seasoned, passionate teachers that love what they do! Sample student tested activities you can use in your classroom, that promote the value of the environment and help students make educated decisions about their future on earth. Enjoy a fun hour of learning how to build a marine trash lab, interactive activities learning how to build a marine trash lab, ocean bingo, aquatic food web and much more! All the activities learned can be taken back to the classroom and used immediately. [Dawn Chegwiddden, Lewisville ISD; Sharon Wood, Lake Lewisville Environmental Learning Area](#)

The NEW Texas Association for Environmental Education: Vision 2017 - Alongside a growing Texas comes a new organization to tell a new environmental education story. Join us as we take a peek at the creation of the NEW TAEE and see where our organization is headed into 2017 and beyond. [Greg Wukasch, TAEE](#)

Volunteer Sources for Educational Events – With a small staff, the Biodiversity Education Center (BEC) had to reach out to different local groups for volunteer facilitators to assist with the center's educational programs. In this session, we will cover how the BEC came to be, what programs it currently offers, what its docent training contains, and how it contacts its volunteers for its programming. [Alisa Annette Kozlowski, Biodiversity Education Center-City of Coppell TX](#)

Bucket Brigade: Reaching Further through Partnerships - The Bucket Brigade is a partnership between Artist Boat and the Galveston Park Board of Trustees and works to address misperceptions, to instill a sense of ownership, and improve environmental stewardship behaviors on Galveston Island. Together they work to raise awareness about human impacts on the marine environments. Learn how they have created a novel partnership that makes education accessible for the whole community. [Amanda Rinehart, Kendall Guidroz, Karla Klay, Artist Boat](#)

Interactive Graphic Organizers for the Science Classroom – TEK it, Make it, Take it and let your class soar on the wings of “TEKativity.” Learn an instructional strategy that presents educators of all grade levels a pedagogical hands-on, motivating and engaging activity that transforms an ordinary paper plate into a student generated product that aligns with the Next Generation Science Standards (NGSS). Life cycles, the water cycle, forest layers and energy pyramids are just a few of the topics that can be taught using this interactive method. [Brian McLean, Forth Worth ISD](#)

Answering the question, “So What?” to create those “A-ha!” moments! - Learn teaching principle, methods and techniques that help your students and site visitors retain and make an emotional and intellectual connection to your subject or environmental resource. These methods, that have been research and developed, are used in parks, museums, zoos and nature centers. [David Owens, Texas Parks and Wildlife Department](#)

Keynote follow-up Session: Following the keynote presentation, we will explore specific elements of what makes experiences memorable. After a short presentation, we will open the floor to share professional experiences with this approach. If you are wanting more "nuts-and-bolts" in using an emotional approach, this session is for you. [Cal Martin](#)

Texas Aquatic Science: From Molecules to Ecosystems, to Headwaters to Oceans - An introduction to Texas Aquatic Science, a comprehensive aquatic science curriculum for middle school and high school students. We'll spend most of our time doing hands on activities from the Teacher Guide, over 700 pages of TEKS aligned, hands-on activities designed to engage all learners. [Johnnie Smith, Texas Parks and Wildlife Department](#)

"Partnerships in Water Education" - Making Connections - Come and see how Hamline University-Center for Global Environmental Education and the Texas Wildlife Association have joined forces to bring watershed education to DFW school districts. We will be sharing components of the program, and our funding and partnership successes. Participants will receive a CD of Waters to the Sea program. [Tracy Hollis, Hamline University; Sarah Grella, Texas Wildlife Association](#)

Cert 101: How to Become a Certified Texas Environmental Educator - The Texas Certified Environmental Educator (TCEE) Program encourages professional development in EE: it acknowledges educators committed to environmental stewardship of Texas's natural resources, and establishes standards for of knowledge, skills, and experience that highly qualified Environmental Educators in Texas should be able to demonstrate. During this presentation, an overview will be provided on how you can be recognized as a Texas Certified Environmental Educator and will include the goals of the program, application and review

process, and required outcomes. [Lisa Brown, Sam Houston State University](#); [Alicia Mein-Johnson](#); [Melissa Mullens, Baylor University](#); [Marti Copeland, Dallas Zoo](#)

Building Cross-Sector Partnerships to Fund Green Student Innovation – Re-imagine the school building as a laboratory for applied STEM education! Learn how green school programs and cross-sector partnerships can promote eco-literacy, environmental stewardship and 21st century skills. Presented by EcoRise Youth Innovation, this session will include a facilitated group dialogue so that attendees have a chance to share insights, learn of each other’s work, and expand their support network of fellow professionals committed to the green school movement. [Abby Randall, Christina Mirando, EcoRise Youth Innovations](#)

Flight of the Monarch Celebration - This session will focus on how we are educating the next generation about the importance of saving the Monarch Butterfly by getting creative, engaging the community, building partnerships and hands on experiences to bring education alive to the next generation. Learn how various partnerships lead to a successful educational program. [Mae Smith, City of Grand Prairie Parks, Arts and Recreation](#)

San Antonio Water System Presents: After the Flush - After you flush, where does “it” all go? And what is “its” impact in our environment? With teachers in mind, the San Antonio Water System produced a video tour of a water recycling center with corresponding curriculum for all workshop participants to unpack and incorporate in their classes. [Lynne Christopher, San Antonio Water Systems](#); [Alicia Mein Johnson](#)

Sex in the Garden - This entertaining and educational talk describes what really goes on in our gardens: pollination. Learn how flowers lure insects to help with their reproduction and how they reward the pollinators. You will never look at the garden in the same old way again. [Janet Smith, North Texas Master Naturalists](#)

Sunday

GreenSchools: Empower Students to take Positive Environmental Action in their School & Community – Project Learning Tree’s GreenSchool program inspires students to take personal responsibility for improving the environment at their school, at home, and in their community. Participants will receive an overview of the five hands-on, student-driven investigations that are at the heart of the GreenSchools program. Through GreenSchools, students examine their school’s energy use, waste and recycling, water consumption, school site, and environmental quality. [Misty Bowie, Texas Project Learning Tree](#)

Small-Scale Aquaponics for the Class - Bring environmental science indoors by bringing the garden to the students, giving students a real world experience they normally wouldn’t have access to. Learn the tips and tricks of setting up an aquaponics garden in the classroom allowing students observe an entire system changing over time. These observations will lead to discussions on the role of soil, how wetlands clean coastal water, water testing, water treatment, eutrophication and many other topics. Learn how to set up an aquaponics system in the classroom Participants will come away with 8-10 lesson ideas on to how to incorporate their garden into weekly, if not daily classroom activities. [Bryan Beck, Liberty High School, Frisco ISD](#)

The Million Dollar Partnership - Volunteers! - Volunteers are a vital resource for all environmental education organizations and centers. Learn how to figure out the economic value of your volunteers as well as

the impact they have on your organization and community. We will also discuss ways to help your volunteers feel like a million bucks! [Linda Dunn, John Bunker Sands Wetland Center](#)

Moving the "Plan" Forward! - Texas, it's time to move the "plan" forward! Come join us for a discussion on how the Texas Natural Resources/Environmental Literacy Plan will be implemented across our state in 2017. During this session, we will do an orientation to the parts of the Texas Natural Resources/Environmental Literacy Plan and learn how it will become the strategic plan for TAAE moving forward. [Greg Wukasch, TAAE](#)

Ethnobotany – Texas Wild Edible History and Walk – Master Naturalist, Bob Richie, has a passion for urban foraging and loves to share that passion with others. He starts with a quick botany lesson on how to positively identify the plants we are looking for and then search out and try some of the fresh and tasty offerings that grow naturally in our area. We will also discuss the useful and medicinal plants that can be found in the area. Bob will also be sharing samples of preserved foraged foods he has collected throughout the year. [Bob Richie, North Texas Master Naturalist](#)

STEAM Curriculum: Building Hands-on Learning for Kindergarten Students - Participants will learn how Science and EE were incorporated into the STEAM curriculum and how the results of a year-long study focusing on the development and implementation of a STEAM curriculum, focusing on science and environmental education, could be used by others to support their efforts in STEAM, STEM and E-STEM curriculum implementation. [Brenda Weiser, University Houston Clear Lake; Dr. Jana Willis; Terri Chvala](#)

Bridging Silos: Partnerships in Natural Resource Literacy in a Land of Private Property – Llano River Field Station (LRFS) engages in a comprehensive spectrum of collaborations focused on finding solutions to regional problems related to natural resources and education. Through partnerships with state and federal agencies, school districts, professional organizations, NGOs, municipalities, landowners, and community colleges, LRFS successfully promotes natural resource literacy in Texas. Attendees will learn partnership strategies and integrating transdisciplinary curriculum with sustainability and trail features. [Tom Arsuffi, Koy Coffer, Texas Tech Llano River Field Station](#)