

# CONFERENCE SCHEDULE

## MONDAY

10:00 AM - 4:00 PM

**FIELD TRIPS**

1:00 PM - 4:00 PM

**PROJECT WET WORKSHOP**

Safe Harbor Room, Sheraton Hotel

4:00 PM - 6:00 PM

**REGISTRATION**

6:00 PM - 7:00 PM

**DINNER\***

7:00 PM - 9:00 PM

**AWARDS & ANNUAL MEETING\***

## WEDNESDAY

7:00 AM - 8:30 AM

**BREAKFAST &  
ANNOUNCE SILENT AUCTION\***

7:30 AM - 8:30 AM

**MORNING BIRD WALK**

MEET AT PAEE TABLE, MAIN BALLROOM

8:30 AM - 9:30 AM

**SESSION SIX**

9:45 AM - 10:45 AM

**SESSION SEVEN**

11:00 AM - 12:00 PM

**SESSION EIGHT**

12:00 PM - 1:00 PM

**LUNCH ON YOUR OWN**

1:00 PM - 4:00 PM

**FIELD TRIPS**

## TUESDAY

7:00 AM - 8:20 AM

**BREAKFAST\***

8:30 AM - 9:30 AM

**SESSION ONE**

9:45 AM - 10:45 AM

**SESSION TWO**

10:45 AM - 11:30 AM

**BREAK / EXHIBITOR HALL OPEN**

11:30 AM - 1:00 PM

**LUNCH\***

1:00 PM - 2:00 PM

**SESSION THREE**

2:15 PM - 3:15 PM

**SESSION FOUR**

3:15 PM - 4:15 PM

**BREAK / EXHIBITOR HALL OPEN**

4:15 PM - 5:15 PM

**SESSION FIVE**

5:30 PM - 6:30 PM

**DINNER\***

6:30 PM - 7:30 PM

**KEYNOTE SPEAKER - IAN SMITH\***

8:00 PM -

**EVENING ACTIVITIES**

\* located in Grand Ballroom at the Bayfront Convention Center

# TUESDAY SESSIONS

All sessions located at the Bayfront Convention Center

	Session 1 8:30am - 9:30am	Session 2 9:45am - 10:45pm	Session 3 1:00pm - 2:00pm
160 A	Project NePTWNE: Advancing Lake Erie Education and Research	Aquaponics: An Innovative Approach to Environmental Education	Developing Essential Skills Using Project & Service-Based Learning Rooted in Environmental Stewardship
160 B	Building Waves of Connection: Integrating Communities, Students, and Science through a Field Station	Creating Waves of Climate Action	State of EE in PA
160 C	Creating for Social Good	After-school hands-on MWEEs for Chester County 21st Century Community Learning Centers	Connecting through Nature Camps
170 A	Unlocking the Scalable Power of the MWEE Trunk	No Water? No Problem!... Bringing the Creek to the Classroom	Pennsylvania Owls - From Textbook to a New Look!!
170 B	Watching Wildflowers: Studying Phenology through Nature's Notebook	Tech for Trees: Microbits and Environmental Education	Catch a Wave: Wellness and Valuable Experiences

Tuesdays Sessions continued on next page

# TUESDAY SESSIONS continued

All sessions located at the Bayfront Convention Center

	<b>Session 4</b> 2:15pm - 3:15pm	<b>Session 5</b> 4:30pm - 5:30pm	
<b>160 A</b>	Proposed Lake Erie National Marine Sanctuary: The Ultimate Connector	Climate Adventures Club	
<b>160 B</b>	Growing Together: Trees for our Future	"Seed to Market" Summer Camp	
<b>160 C</b>	Navigating Trauma in the Outdoors	Art as Advocacy: Innovative Approaches to MWEE Civic Action Projects	
<b>170 A</b>	Partners as Tributaries to Educational Rivers	Naturalist's Myths	
<b>170 B</b>	Sustainability Summit for Education Leaders with Penn State University	Water, Water Everywhere: Activities for a Thirsty Planet	

# WEDNESDAY SESSIONS

All sessions located at the Bayfront Convention Center

	<b>Session 6 8:30am - 9:30am</b>	<b>Session 7 9:45am - 10:45pm</b>	<b>Session 8 11:00am - 12:00pm</b>
<b>160 A</b>	Where does my water come from?: Connecting students to the people and places that provide their clean drinking water	It Takes a Village! College/Schools/Community Partnerships to Bring Hands-On Science to 4th Graders	Strategic Planning - Lessons Learned and Future Factors
<b>160 B</b>	Teaching Leaders to Connect - Community Stewardship	Supporting Environmental Advocates in Your Community	Shipboard Science: Connecting Experts to Educators for MWEEs
<b>160 C</b>	Nurseries nurturing communities: Using live stake nurseries to engage communities in stream health	Designing a STEELS-Aligned Lesson Based on Streamside Forest Research	Environmental Literacy For All
<b>170 A</b>	Using PA STEELS to Channel the Currents of Classroom Practice to Support Environmental Literacy and Sustainability Education	Growing Together: Partnering to Bring Environmental Education to United Way Community Schools	Into the World of Fungi
<b>170 B</b>	Don't Yuck my Yough: Community Fun to Promote Water Quality	State of Lyme & Tick-borne Diseases in PA & Dare 2B Tick Aware Prevention	Waves of Monarchs: 250 Monarch Waystations

# TUESDAY EVENING ACTIVITIES

8:00 pm - 9:00pm

## Backyard Beekeeping & Pollinator Gardening

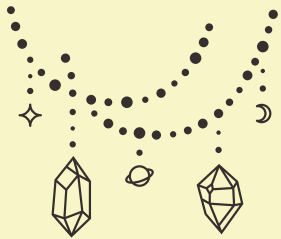
Presented by Mike Zewe



Do you want to grow a garden that will attract pollinators and make you the envy of the neighborhood? Then come hang out with the cool kids in this evening activity. PAEE's Development Director, Mike Zewe, will facilitate a discussion around botany, living the hive life, sustainability, and European garden folklore, while sharing slides of his garden art. Mike is a lifelong naturalist and has been keeping bees for 8 years. He is known for his creativity with gardens and naturalist knowledge throughout his community and his social network.

## Paper Bead Workshop

Presented by Slippery Rock University



Come join SRU students to experience the magic of upcycling! Making paper beads is a fun and eco-friendly way to de-stress and make connections with other participants. This workshop will focus on upcycling paper into beads. The beads can be used to make bracelets, keychains, necklaces, and more. Participants will learn how to make the beads and will adorn their creations with wooden and glass beads to enhance their beauty.

*Maximum participants: 25*

*Suggested donation for supplies: \$5 per participant*

## The Watershed Game: A Hands-On Team-Building Simulation

Presented by Cindy Murdough



The Watershed Game was developed by Minnesota Sea Grant and University of Minnesota Extension. Teams of community members or classroom students play the game to learn about how various land uses (agriculture), impact bodies of water (streams, rivers, lakes, or coasts). Land management choices are made boosting resilience units in relation to their mitigating the impact of pollution (sediment, nitrogen, or phosphorus) of water. Teams use limited financial resources to implement these strategies without going broke.

The presenter will be the facilitator of this game. Participants within each of the land use teams will have a scripted role. Team decisions will be made and implemented by choosing from a stack of land use action cards. Ultimately most teams realize their greatest power lies in eventually cooperating with all the other teams to have the most cost efficient, proactive outcome regarding the water in their watershed.

8:30 pm - 10:00pm

Informal meetup at Shoreline Bar & Grill  
at Courtyard Marriot

*Gather  
Together*

# SESSION DESCRIPTIONS

## TUESDAY SESSION 1 8:30 AM - 9:30 AM

160 A

### ***Project NePTWNE: Advancing Lake Erie Education and Research*** – Sherri Mason

Gannon University is committed to its long history of aquatic research, education and outreach. This is demonstrated through our emerging initiative regarding lake health. Project NePTWNE takes an inclusive and holistic approach to addressing water quality, climate change, economic development, and quality of life. This multifaceted project takes a three pronged approach to Lake Erie Education and Research: MEASURE, MITIGATE, and MANUFACTURE. Learn more about our project and ways for educators to be involved.

160 B

### ***Building Waves of Connection: Integrating Communities, Students, and Science through a Field Station*** – Siobhan L. Fathel & Matthew Wilson

This presentation introduces a four-part model for connecting communities, students, and scientific research through a field station, demonstrating how these interactions can amplify environmental education (EE) efforts. Using Susquehanna University's field station as a case study, we showcase a continuum of engagement that brings together K-12 students, local community members, and university researchers, creating a hub for environmental learning and engagement.

The first segment focuses on community engagement, highlighting programming with the Middle Susquehanna Riverkeeper's Environmental Education Leadership for Students (EELS) program and partnerships with the Chesapeake Conservancy, which bring people of all ages into environmental learning experiences. Next, we explore student engagement, featuring a PA-DEP funded grant that brings students and teachers to the field station for STEELS-aligned workshops, immersing them in real-world environmental challenges. The third segment ties these efforts to science, emphasizing how the field station acts as a bridge, connecting research with both community and student learning. The session concludes with a workshop where participants explore how to leverage their unique strengths and resources to build similar connections within their own contexts, making EE more impactful and inclusive. This session encourages attendees to envision ways to weave community, students, and science into a cohesive, sustainable model.

160 C

### ***Creating for Social Good*** – Jacie Maslyk

This session will focus on promoting empathy and understanding through creativity, edtech, and maker learning with young people. When students engage in creating for a purpose larger than themselves, they are engaged in relevant work that makes a positive impact. Connecting engineering/design process with human-centered practices elevates learning as students use creativity, collaboration, critical thinking, + communication skills increase awareness and the ability to solve problems that impact our environment.

170 A

### ***Unlocking the Scalable Power of the MWEE Trunk*** – Rebecca Schaufele & Alexandra Konsur-Grushinski

In this engaging presentation, participants will be introduced to the Meaningful Watershed Educational Experience (MWEE) Trunk, available through the local Intermediate Unit STEM Lending Library system. Designed to support scalable environmental education, the MWEE Trunk offers resources that empower teachers to engage students in hands-on, inquiry-based learning about their local watersheds.

The trunk contains classroom-ready educational resources aligned with STE(ELS). Participants will explore how these resources can be adapted to meet the needs of diverse classrooms, fostering real-world learning and environmental stewardship. A key objective of this presentation is for participants to discover how the STEM Lending Library approach can be scaled to their unique areas of influence, whether in the classroom, across grade levels, or in community-based learning. Participants will learn strategies to integrate environmental inquiry across disciplines—while making the tools available to educators and their students.

By the end of the session, participants will be equipped with practical knowledge on how to capitalize on networks in your area to inspire students, promote environmental literacy, and create meaningful, real-world learning experiences that are scalable and impactful.

*Session 1 continued on next page*

***Watching Wildflowers: Studying Phenology through Nature's Notebook*** - Sara Klingensmith

Phenology is the study of seasonal changes, a leading indicator of climate change, and an approachable way to actively engage communities with climate science. We will share our experiences developing a local community science program at Barking Slopes Conservation Area, a forest near Pittsburgh, that uses a free app called Nature's Notebook, learn about the ongoing research at the site, and explore how the phenology program is supporting it.

Allegheny Land Trust (ALT) and Carnegie Museum of Natural History (CMNH) partnered to implement a phenology trail at Barking Slopes Conservation Area. Nature's Notebook is a free app developed by the USA National Phenology Network that empowers the public to record and share observations in a national scientific database. This program relies on community volunteer efforts to collect phenophases, or observable life stages.

During the presentation, we will elaborate on successes and challenges in establishing the community science project, how we communicated the project to the public, how we connect the project with current and future research goals, and our plans for incorporating phenology in other programs

# TUESDAY SESSION 2 9:45 AM - 10:45 AM

160 A

***Aquaponics: An Innovative Approach to Environmental Education*** – Alyssa Moore & Spenser Yost  
Intermediate Unit 1 and INTAG Aquaponics will present innovative strategies to engage students in agricultural education through the use of cutting-edge technology in aquaponics systems. Participants will gain insights into how various local schools are using aquaponics to support implementation of PA STEELS standards, fostering hands-on learning. Participants will walk away tangible resources to begin implementing Aquaponics in the classroom.

160 B

***Creating Waves of Climate Action*** – Kirsten Barbera & Gabby Rose  
Climate change is the biggest threat affecting our collective futures. Yet when young people transition from high school into the world, their achievements in the environmental field are largely unrecognized. The Youth Climate Institute supports students as they build their resumes and skills at a pivotal time for their college and career goals, building a cadre of science-literate ambassadors along the way.  
In this program, students can achieve two certification levels – Certified Ambassadors and Certified Ambassadors with Honors. Program components include workshops on climate science, impacts, justice, and solutions, along with community action projects. Through their community projects, students identify and initiate actions that lessen the effects of climate change on human health, biodiversity, and the economy.  
As a flexible, chapter-based program, YCI allows students to dive into the local effects that climate change is having where they live and empowers them to take action. Chapters can be led by formal high school teachers or informal educators and the framework of the program can act as a “turn key” solution to staying engaged with high school students. YCI educators will share hands-on science activities and best practices for engaging youth in climate action.

160 C

***After-school hands-on MWEEs for Chester County 21st Century Community Learning Centers*** – Kathryn Metzker & Steve Mohapp  
Stroud Water Research Center educators will discuss partnerships, MWEE design, and out-of-school time programming, sharing experiences of partnering with 21st Century Community Learning Center (CCLC) sites to deliver Watershed Science Technology Engineering and Math (STEM) programming and professional development. Programming is based on watershed STEM Meaningful Watershed Educational Experiences (MWEEs) and is tailored to elementary students, particularly multilingual learners. Presenters will share hands-on activities to enhance MWEEs, engaging students outdoors and emphasizing final civic action projects.  
This project aims to engage staff and students in academic enrichment activities (after-school and summer MWEEs) to inspire stewardship and elevate future watershed STEM programming at partner sites. Presenters will emphasize the importance of partnerships in co-creating programming and in providing responsive professional development that meets the needs, interests, and abilities of educators. The aim of this professional development is to increase educator knowledge and capacity for teaching outdoor education, using the MWEE, and building and maintaining partnerships with environmental education providers. This presentation will focus on ways to enhance classroom education, foster curiosity, and encourage fun learning through elevating out-of-school time programs.

170 A

***No Water? No Problem!... Bringing the Creek to the Classroom*** – Rebecca Schaufele  
In this hands-on session, participants will explore how to use Leaf Packs as an engaging, inquiry-based tool for investigating watershed health in the classroom, even if your school does not have access to a local water source, such as a creek or stream. Leaf Packs allow students to study aquatic ecosystems in the classroom by observing the diversity of macroinvertebrates that inhabit decomposing leaves, which provides insight into water quality. Educators will learn how to set up and monitor Leaf Pack experiments, analyze collected data, and connect findings to larger environmental issues. Participants will learn about free and low-cost options for supplies and will leave with practical strategies to incorporate scientific investigation, data analysis, and environmental stewardship into their curriculum.

170 B

***Tech for Trees: Microbits and Environmental Education*** – Melissa Duckworth  
Join us for this a hands-on session that combines coding and science to create a dynamic learning experience. This session will show participants how to integrate all strands of the new STEELS Standards by using Micro:bits to explore the world around us! Discover how to seamlessly blend technology with environmental education and inspire your students with the future of STEELS learning! No experience with Micro:bits or STEELS required to join the fun!



# TUESDAY SESSION 3 1:00 PM - 2:00 PM

160 A

## ***Developing Essential Skills Using Project & Service-Based Learning Rooted in Environmental Stewardship*** - Gregory Smith

This proposal advocates for the integration of project and service-based learning within educational frameworks, focusing on environmental stewardship and community service. By creating classroom routines like composting cafeteria waste, organizing tree-planting events, and making sustainable art from recyclable materials, teachers can establish cross-curricular connections through real-world applications that develop essential skills for future career success in any industry and occupation.

Implementing these hands-on projects can prepare students to think sustainably, whether in their daily lives, career choices, or how they make choices that impact our planet. When administered correctly, students develop a range of essential skills that include collaboration, project management, and problem-solving skills. When integrated into independent or small group projects, students have opportunities to brainstorm innovative solutions, manage projects from conception to execution, and think critically about their impact on the environment. These activities not only teach students how to follow directions and adhere to routines but also foster a sustainable mindset that values environmental, social, and economic sustainability.

I have used project and service-based learning rooted in environmental stewardship and community service for almost eight years. The presentation will include a range of examples from total class participation, recurring tasks, entrepreneurship, art and science engagement, and independent capstone projects.

160 B

## ***State of EE in PA*** - Tammie Peffer

Join the PA Department of Education's Executive Director for the PA Advisory Council on Environmental Education Environmental Literacy and Sustainability Content Advisor for updates on PDE initiatives and upcoming projects (e.g. STEM, Environmental Justice, Pathways to Green Schools, Integrated Pest Management, PA Environmental Literacy Initiatives, etc.) and explore their fit in the world of environmental education, parks, and recreation. Following the update, the E&E Advisor will encourage group discussion designed to collect information and perspectives from participants regarding the state of EE and needs in the field regarding new state and national-level EE initiatives and guidance documents. This discussion will help identify streetlights of statewide programs and needs.

Q&A and Discussion about the status of academic standards and new testing cycles related to STEELS will be included. Within this session, we will work to improve consistent messaging regarding the direction, intent, and best practices of EE across the commonwealth.

160 C

## ***Connecting through Nature Camps*** - Jeannie Shay

Learn how the Lawrence County Conservation District connects with the community offering three tiers of Nature Camp Programming. Each camp provides opportunities for participants to engage in meaningful, hands-on environmental education experiences that promote individual action, lifestyle changes, and community collaboration in efforts to protect our natural resources.

Jeannie Shay, Watershed Specialist/Educator, will present an overview of our Summer Nature Camp(ages 8-11), Advanced Nature Camp(ages 12-17) and Grown-up Nature Camp (ages 18+). She will offer insight on building the curriculum, how she grew the program and struggles along the way.

170 A

## ***Pennsylvania Owls - From Textbook to a New Look!!*** - Judy Acker & Kaitlyn Royal Carlson

Come learn about what makes an owl an owl and dive into the eight species that live or visit PA each year! Listen to their distinct vocalizations and discover what makes each one special. Then dive in and get your hands dirty exploring an owl pellet where you will discover the critters that the owl ate by identifying the bones you find!

Years of presenting to hundreds of students in three school districts has prompted streamlining, updating and tweaking data sheets, bone sorting charts, and templates to make the program more meaningful and engaging for students and easier for teachers to follow up. Making connections between owls, their preferred habitat, and the prey animals supported therein will be highlighted. Come and learn some tricks and tips to make presenting this hands-on program better for you, the students and the teachers! This session can be a component of a MWEE as it can be localized to your specific region or watershed.

*Session 3 continued on next page*

## ***Catch a Wave: Wellness and Valuable Experiences*** – Suzann Schiemer

Come and explore three nature-based wellness programs that highlight the importance of community partnerships and collaboration. Since 2022, the Bucknell Institute for Lifelong Learning (BILL) has offered course work each semester on nature-based wellness. The course content for *Wellness Naturally: More Than a Walk in the Woods* and *Wellness Naturally: More Time in the Woods* presents current science-based data on the health and wellness benefits of time spent in a natural environment. Both courses utilized findings and recommendations presented in the Pennsylvania publications, *The State of Our Health: A Statewide Health Assessment of Pennsylvania* and the *Pennsylvania Statewide Comprehensive Outdoor Recreation Plan*. An outgrowth of the *Wellness Naturally* courses is the newly formed monthly gathering of individuals interested in pursuing nature-based wellness immersions that are book-inspired. The intent of the *Wellness Naturally* offerings is to explore nearby nature, provide nature opportunities for all, allow for engagement in experiential nature-based learning, provide opportunities to address mental health issues such as social isolation, and develop a personal practice of reciprocity. The *Wellness Naturally* programs have continued to evolve due to the collaborative efforts and partnerships of various state and local community entities.

# TUESDAY SESSION 4 2:15 PM - 3:15 PM

160 A

## ***Proposed Lake Erie National Marine Sanctuary: The Ultimate Connector*** - Honey Stempka

Connecting to science, check. Connecting to classrooms, check. Connecting to communities, check. Come familiarize yourself with the proposed Lake Erie National Marine Sanctuary and hear about the ways in which existing national marine sanctuaries and the proposed Lake Erie National Marine Sanctuary specifically, utilize community connections to provide unique classroom experiences and links to the natural world for all learners.

160 B

## ***Growing Together: Trees for our Future*** - Hannah Rhodes & Claire Ciezki

Since 2020, LEAF has made it a goal to plant 275000 trees - one for each citizen of Erie County. The majority of these trees have been planted at Erie's Public Schools through a program titled "Growing Together: Trees for our Future." This program provides trees, tools, and lessons to Erie's Public School students at no cost, and we often plan tree-planting events onsite to involve these young learners!

160 C

## ***Navigating Trauma in the Outdoors*** - Amber Stacey

While surprises can be exciting, to the traumatized brain, surprises can signal danger, and predictability is a comfort. One aspect of trauma-informed teaching is creating consistency and predictability for students. Teachers in a traditional classroom can do this by creating structured classroom spaces and repeating routines over time. Some elements of outdoor teaching can be impossible to predict or control, and outdoor educators may only see students for short periods of time, making it challenging to create predictable and consistent routines. The first half of this session will give a brief overview of current understandings of trauma, related information on brain states, and basic tenets of trauma-informed teaching. In the second half we will discuss concrete strategies for creating supportive, predictable programming in the unpredictable outdoors.

170 A

## ***Partners as Tributaries to Educational Rivers*** - Sarah Jennings & Carrie Lankford

Partners in the community, like tributaries, are crucial to the health of the "educational river system". Lower Susquehanna River Keepers Association, Earth Force, and Red Lion Area School District are facilitating a multi-community partnership that provides four vertically aligned Meaningful Watershed Educational Experiences (MWEE) for students K-12 with pre and post lessons. Come hear how we are using the PA STEELS standards to drive meaningful and authentic learning experiences for our students that specifically address the Environmental Literacy and Sustainability standards, through the MWEE framework and Earth Force Process. In this session learn how to find local partners to bridge the gap between formal and non-formal educators through a collaborative process. We will dig into planning for long term student environmental literacy outcomes, making local community connections, creating positive social and environmental impacts through action projects, and culminating internships with partners of students' choice.

170 B

## ***Sustainability Summit for Education Leaders with Penn State University***

- Amanda J. Smith & Peter Boger

The Penn State University K-12 Engagement Network, in collaboration with Penn State Sustainability, hosted a Sustainability Summit for education leaders from 20 school districts to collaborate with the Penn State community to pave new pathways for K12-University partnerships focused on increasing sustainability efforts in the K-12 space. Over the course of a two-day annual summit and development of K12 + University cohorts into a virtual community of practice for environmental educators prioritizing sustainability in the new STEELS standards, we will build education leaders' capacity to develop sustainable preK-12 schools and teaching and to pursue fulfillment of requirements for nomination for the Pennsylvania Department of Education (PDE) Pathways to Green Schools program, the U.S. Department of Education Green Ribbon Schools (ED-GRS), or a District Sustainability Award. This session will provide insights into the new K12 - University partnerships forming to aid schools integrating sustainability based projects and activities aligned with their needs and vision. We will address lesson learned, successes and challenges, and how to get involved in the future.

160 A

***Climate Adventures Club*** – Mark Reardon

The Climate Adventures Club is an in-person pilot program designed for virtual learners in grades 9-12 that combines climate friendly adventure activities (kayaking, hiking, and geocaching) with real-life field science and research to explore the local causes, effects, and solutions of climate change. Communitopia and Venture Outdoors have been collaborating on the design and implementation of a multi-disciplinary climate education project that empowers students to create positive environmental change through the use of personal and group climate action plans that incorporate solutions-based (MWEE) learning models. In the process, students explore a variety of careers in sustainability and conservation, where they are introduced to the tools of science used by professionals to understand local climate change issues and solutions.

160 B

***"Seed to Market" Summer Camp*** – Doreen Petri & Stephanie Ciner

The "Seed to Market" Summer Camp is a unique opportunity for middle school students to experience the local food system progression: production, processing, distribution and marketing. Each day includes a hands-on lesson and field trips to farms, farmers' markets and local businesses to understand our local food system and the related careers along the way. The students prepare lunches, design a cover for their journal, purchase items at a farmers' market, contribute to a labyrinth at a mushroom farm, bake pastries, forage at an arboretum and create smoothies. Finally, in their journal, they take a food item of their choosing through the food system steps to market their product to the group.

160 C

***Art as Advocacy: Innovative Approaches to MWEE Civic Action Projects***

– Karen Woods & Melissa Duckworth

Learn how you can integrate the arts into MWEEs to foster civic action and environmental stewardship. Through practical examples and interactive discussions, we will explore successful programs that have utilized various artistic mediums--visual arts and creative writing--to amplify environmental messages and drive community involvement. Attendees will gain valuable insights into designing and funding art-infused MWEEs that encourage civic engagement and interdisciplinary collaboration.

170 A

***Naturalist's Myths*** – Scott Detwiler

Is the Daddy Long Legs the world's most poisonous spider? Spoiler: No. Nature educators can absorb inaccurate factoids into their bank of knowledge. However, a myth can open the door to more learning. We will look at some common nature myths, review best practices for preventing inaccuracies from creeping into your repertoire, while using these myths as hooks to learn more about nature.

170 B

***Water, Water Everywhere: Activities for a Thirsty Planet*** – Julie Travaglini

Just a small fraction of all of the water on Earth is accessible fresh water that we need for agriculture, industry and households worldwide. In this interactive session, discover interdisciplinary lessons, matched to state standards, that explore trends in water use, water pollution and conservation efforts in a world of nearly 8 billion people with growing water demands. The presenter will share digital tools for the virtual classroom, as well as strategies for the in-person school or nature center.

In this interactive session, discover interdisciplinary lessons, matched to NGSS and state standards, that explore trends in water use, water pollution and conservation efforts in a world of 8 billion people. The presenter will share a variety of activity formats (demonstrations, interactive stories, hands-on labs and game simulations) that address a number of students' connections to water including freshwater availability, rising demand of water resources, human impacts on watersheds, and explorations of sustainable relationships between people and marine ecosystems. She will share strategies for instruction at schools and nature centers. Participants will receive activity instructions and background materials in an electronic format, with access to a password-protected website. All presented activities are matched to Pennsylvania's STEELS Standards.

160 A

***Where does my water come from?: Connecting students to the people and places that provide their clean drinking water.*** - Julia Boyer & Suzanne Safran

What natural source does your drinking water come from? What happens inside a drinking water treatment plant? Experience a program that was created when Aqua, a suburban Philadelphia water utility company, approached Riverbend Environmental Education Center to help local students answer these questions. In this session, you will experience "Where Does My Water Come From?" - the program Riverbend developed based on hyper-local water infrastructure information to provide a real-world context for fifth graders studying water. This hands-on, locally relevant, and collaborative program illustrates the power of utilizing community knowledge and resources to support student learning. The program includes use of the "Enviroscape: Drinking Water, Wastewater, and Your Watershed" model, the book "One Well: The Story of Water on Earth" by Rochelle Strauss, as well as maps custom-created for the students' school district. Participants will walk away with classroom-tested ideas for a successful lesson on where our drinking water originates!

160 B

***Teaching Leaders to Connect - Community Stewardship*** - Linda Falcone

In today's fast-paced world, the ability to authentically connect with others is essential for effective project leadership. The Community Stewardship program was designed to help environmental leaders develop the skills necessary to build strong, meaningful relationships with their teams, peers, and other community leaders. During this workshop, participants will learn about engagement techniques shared during the Community Stewardship program.

Participants will also gain practical tools for improving communication, and fostering inclusivity. By understanding the importance of making strong connection, attendees will be equipped to inspire and motivate others, leading to increased engagement, productivity, and overall success.

Whether you're a seasoned leader or aspiring to a leadership role, this workshop will provide valuable insights and strategies to enhance your ability to connect with others and lead with impact.

160 C

***Nurseries nurturing communities: Using live stake nurseries to engage communities in stream health*** - Natalie Marioni

The Penn State Master Watershed Stewards (MWS) have installed several live stake nurseries across Pennsylvania to provide source material for local stream restoration efforts and site locations for educational workshops. Live stakes are branch cuttings from certain native trees and shrubs that grow into mature species when properly planted along streambanks, providing bank stabilization and erosion control. Because live staking is easy to learn, requires only minimal supplies, and the stakes are low-cost when purchased or free when harvested directly, it is a valuable technique to introduce to landowners interested in improving stream health. The MWS nurseries are designed to support local and regional conservation efforts and have the potential to become a focal point for conservation education by serving as prime locations for live stake and native plant workshops. This presentation outlines how the MWS program leverages partners to develop local nurseries and is engaging and educating communities in the installation and use of these nurseries. Additionally, the presentation touches on a developing phenology project utilizing the nurseries to provide research-backed recommendations for live stake harvesting and baseline data on possible phenological shifts due to climate change.

170 A

***Using PA STEELS to Channel the Currents of Classroom Practice to Support Environmental Literacy and Sustainability Education*** – Tamara E Pepper & Michelle Niedermeier

A recent study by the Smithsonian and Gallup recognized the unique capacity of PA STEELS (Science, Technology & Engineering, Environmental Literacy and Sustainability) standards to address United Nations (UN) Educational, Scientific and Cultural Organization Education for Sustainable Development Goals: Learning Objectives. The Environmental Literacy and Sustainability (ELS) domain of STEELS addresses all the UNESCO objectives. The PA ELS domain also opens the opportunity to address all seventeen UN Sustainable Development Goals using a local lens. ELS moves STEELS beyond NGSS by blending the cognitive, socioemotional, and behavioral domains of learning.

Learn how to identify local resources to support curriculum development utilizing the full potential of the PA STEELS standards required for a paradigm shift towards community-connected learning that examines socio-scientific connections and contexts across all disciplines. This session will introduce several tools designed specifically to ease the burden as you adopt the new standards. Tools include the PA LEA Environmental Literacy and Sustainability Planning Template, Green Ribbon and Eco-Schools Toolkits, Environmental Learning Model, and the NOAA MWEE framework. Participants will begin to develop district or school-level Sustainability character statements identifying local eco-linked phenomena/field experiences and a scope and sequence for environmental learning experiences that transect multiple grade bands.

170 B

***Don't Yuck my Yough: Community Fun to Promote Water Quality*** – Lindsey Waugaman

Mountain Watershed Association's education program aims to connect everyone to nature and the Youghiogheny River and it's watershed by promoting fun and play in nature. We bring the Yough to communities and the communities to the Yough. I want to share how we do this and what has been successful and what have been our struggles: river cleanups on the water, busing environmental justice communities to recreate for free in the watershed's lakes and rivers, teaching families about water quality, and the ecosystems and creatures that rely on excellent water quality. I will share these topics with hands on activities with the materials we have to borrow in MWA's outdoor lending library, with suggestions on how to create these activities in their own education programs on a budget. These activities include: water quality testing, building a beaver dam, build a mini-rain garden filtration system, and our PA Fish station where kids are Gyotaku (Japanese fish printing w/paint and silicon fish.)

160 A

***It Takes a Village! College/Schools/Community Partnerships to Bring Hands-On Science to 4th Graders*** – Wendy Kedzierski & Lisa Whitenack

Partnerships are the foundation of our 4th Graders as Scientists program for all 4th-grade students in Crawford Central School District. This workshop will explore what we have learned over the years of implementing this event that relies on the School District, Allegheny College, Meadville community partners, and regional environmental organizations working together. This program comes out of Partners in Education (PiE), which is made up of community members who meet regularly with school district staff to enhance learning opportunities for our entire community. 4th Graders as Scientists came about in 2013 from the need for hands-on science experiences that address state science standards for students at this level. We'll discuss what goes into maintaining the partnerships necessary for the success of the program, how it has evolved over the years, and how students have benefitted from the program.

160 B

***Supporting Environmental Advocates in Your Community*** – Tess Wilson

How can you support your communities as they advocate for the animals and ecosystems that make Pennsylvania unique? Join Tess Wilson (Network Engagement Manager, Audubon Mid-Atlantic) for a session focused on environmental advocacy at various levels of engagement--from hosting educational webinars to planning letter-writing workshops to participating in lobby days. Tess will also share Audubon Mid-Atlantic's advocacy priorities for 2025 and beyond, along with ways you and your community can participate in their efforts.

160 C

***Designing a STEELS-Aligned Lesson Based on Streamside Forest Research***

– Steve Mohapp & Steve Kerlin

Stroud Water Research Center is piloting a new lesson based on decades of research about streamside forests. The lesson was designed from the ground up to align with the new PA STEELS Standards. Stroud Center educators will share more about the design process – from brainstorming ideas to piloting the first programs to evaluating student learning. The presenters will facilitate discussion about creating engaging curricula aligned to the new standards.

The new lesson connects middle school students to the Stroud Center's years of research about how forests benefit streams, which is even more important in the face of climate change. Session participants will have time to take part in the lesson activities and reflect on strategies to design curricula aligned to STEELS Standards in their own settings.

170 A

***Growing Together: Partnering to Bring Environmental Education to United Way Community Schools***– Sarah Bennett & Jeanette Long

Through its nationally recognized Community School Model, United Way of Erie County aims to address non-academic barriers to student success. One critical element of this model is the increased enrichment and expanded learning opportunities for students who lack access to such resources through conventional means. Nature-based learning is particularly effective in engaging students and deepening their connection to the environment, yet many obstacles prevent this type of learning. In this presentation, United Way of Erie County and Asbury Woods will discuss their collaboration to enhance access to nature-based learning by overcoming these barriers and create meaningful educational experiences for all students.

170 B

***State of Lyme & Tick-borne Diseases in PA & Dare 2B Tick Aware Prevention*** – Eric Huck

Pennsylvania has led the nation in 11 of the last 12 years in Lyme disease cases. It has never been more critical to have tick prevention know how. Particularly for outdoor workers!

Participants will learn the brief history of Lyme legislation in PA, the impact of Lyme and tick-borne diseases in PA, as well as signs and symptoms of these diseases.

The prevention component is via PA Lyme's highly rated Dare 2B Tick Aware program, including tick identification, tick behavior, tick habitat and life cycle, and steps to take for personal, yard and pet prevention.



160 A

**Strategic Planning - Lessons Learned and Future Factors** - Matt Marsden

Are you due for a new strategic plan? Do you want to learn more if you've never done it? We will go through common elements and processes for successful strategic planning by analyzing the process used to create the 2024-2027 PAEE Strategic Plan, based on guidance from the North American Association for Environmental Education (NAAEE) and strategic planning facilitation from Dave Chase of DRC Consulting.

160 B

**Shipboard Science: Connecting Experts to Educators for MWEEs**

- Michelle Niedermeier & Sherri "Sam" Mason

The Lake Erie Shipboard Science Workshop is part of the Center for Great Lakes Literacy's annual Great Lakes Shipboard Science workshop series that connects educators with scientists aboard the US EPA's R/V Lake Guardian. The week-long, immersive workshop offered a first-hand exploration of Lake Erie ecology, geology, weather and biogeochemicals processes, with particular emphasis on harmful algal blooms, microplastic pollution, and benthic communities and habitats. Participants collected physical water data, plankton, sediment, and surface plastics while traversing Lake Erie. The experience is designed to promote Great Lakes sciences, as well as instructional technology and pedagogical best practices. Participants also forge lasting relationships with science researchers and other educators. In 2024, out of 115 applications, 15 educators (3 from PA!) were chosen to participate in the program. This hands-on opportunity rotates amongst each of the Great Lakes on a five year basis. In this presentation, conference attendees will be able to identify ways to incorporate the educational opportunities from the Shipboard Science Workshop into their own educational settings.

160 C

**Environmental Literacy For All** - Carrie Lankford & Gina Mason

As schools begin to integrate the new PA STEELS standards, less emphasis is being placed on the ELS section of these standards. Our job is to make sure districts feel comfortable and confident embedding Environmental Literacy and Sustainability into their curriculum. Many of the widely suggested and used curriculum programs are based in NGSS. Teachers and school leaders are attempting to make the easiest transition in classrooms, but it is often at the expense of losing the ELS pieces. We are currently partnering with Williams Valley School District to put ELS on a level playing field, through resourcing with local partners, providing ELS based curriculum, place-based education training, and the creation of a district "Green Team". Creating a district Environmental Literacy Plan and embedding systemic MWEE's, allows our district team and stakeholders to reach every student K-12 and encourage them to be stewards of their local environment.

170 A

**Into the World of Fungi** - Sara Klingensmith

Searching for mushrooms is like an exciting treasure hunt but taken at a naturalist's pace. Fungi are incredibly diverse with adaptations that challenge the imagination. Learn how to search for fungi, identify common species, and understand their various roles in the ecosystem with an Allegheny Land Trust educator who is also a Western Pennsylvania Mushroom Club identifier. By paying attention to this often-misunderstood Kingdom, we can deepen our connection with nature and better understand ecological connections while sharpening our observation skills. Participants will learn about local fungal species while learning how to introduce the field of mycology to nature walks and lessons.

170 B

**Waves of Monarchs: 250 Monarch Waystations** - Melissa Reckner

In 2023, Westmoreland County celebrated its 250th anniversary and to highlight the natural resources of the region, the Westmoreland Pollinator Partners of which Brandywine Conservancy is a part, set a goal to have 250 Monarch Waystations established in the county by year's end. Learn about the Westmoreland Pollinator Partners and their efforts to promote, protect, and preserve pollinators and their habitats through collaborative events and activities. From "Pollinator Passports" to the "Pennsylvania Pollinator Photo Challenge," over two dozen groups in the partnership find ways to educate and empower citizens to embrace native plants and the life they support. Consider setting a goal of 250 Monarch Waystations in your county for America's 250th in 2026!