

**Strand 1: CREATING CONNECTIONS WITH NATURE - Presentations in this strand focus on interpretive techniques that inspire participants to connect with nature during outdoor and environmental programs.**

Keeping the Magic Alive

Steve Van Zandt

From stories of inspiration to teaching ideas that you can use tomorrow, this workshop is designed to renew your love for the art of teaching. We will look at outdoor ed. guiding principles each with hands on examples to explain ways to infuse a theme, "Framing" and "Kinesthetic Focusers". Join me for a thought provoking and active session doing what I love best, immersion and changing perspectives in nature. Handouts Provided. (This workshop includes past workshops but always with new ideas)

Become an Effective Naturalist

Dean Thompson

Many of us teach natural history and even hold the title of Naturalist. What does this mean? What is our role? How can you become a better naturalist and live up to the responsibilities of such a prestigious title? Dean Thompson, a teacher, storyteller, wildlife biologist and Naturalist for over 30 years will facilitate an entertaining and informative lecture/discussion on resources, teaching techniques, how to prepare for and lead a walk, student management, and ways to become an even more effective naturalist.

Traditional Uses of Yucca

Jacque Nunez

Jacque Nunez, descendent from the Juaneno Band of Mission Indians/Acjachemen Nation and 2009 Educator of the Year for American Indian's 32nd Annual State conference, will take you through the process of pounding yucca. In doing so you will discover soap, fibers for cordage making and leave with a paint brush and a bracelet. [www.journeystothepast.com](http://www.journeystothepast.com)

Engaging and Managing Students in Outdoor Science

Emilie Lygren and Kevin Beales

There's a lot of talk about the need to manage student behavior so they can participate in learning experiences, but there are specific things you can do that help encourage positive student participation and prevent negative behaviors. We'll address how to engage students positively from the beginning by creating an environment in which they have the highest chance of being the best versions of themselves, so everyone in the group can have a positive experience and learn. We'll model a short learning experience, showing how the structure of a science activity can create intrinsic motivation in students, and support their participation and learning. Novice or experienced instructors will leave with a better understanding of how to set up productive learning experiences.

Moose Nuggets

Ben Jamin Walker and Claire Walker

Learn quick and crazy skills to awaken students to experiences in nature, as tested on over 30,000 California outdoor school students and various wild animals. Learn easy calls for bear, dove/owl, mountain lion, raven, snipe, heron, and coyotes in the moonlight. Also experience Ben's primer on bushwood archery, easy fire-by-friction methods, and fun campfire technologies. Also hear about summer jobs in China and at Tribal Wisdom Academy near Santa Cruz, CA.

Habitat Safari

Kim Laizer

Want a fun way to encourage exploration and observation, build on your students' understanding of ecology, inspire curiosity, and weave cross-country travel in with teambuilding? Join Kim Laizer for (and participate in) an immersive learning activity-set she originally created years ago when teaching as a naturalist for SJOE. We will be walking off trail part of the time, so please wear appropriate footwear. You will also need a piece of paper (or a page you don't mind removing from your journal), a pencil/pen, and a sense of adventure!

### Traditional Basket Weaving

Jacque Nunez

Jacque Nunez, descendent from the Juaneno Band of Mission Indians/Acjachemen Nation and 2009 Educator of the Year for American Indian's 32nd Annual State conference, will guide you to the plants used to make a traditional basket. However, you will make a simple round reed basket. There is a \$7.00 charge for materials. You will make stave game, and guessing game, stick toss, ring toss and receive a bag to keep them in, \$3.00. Walk away ready for YOUR next environmental walk with your bag of Native American goodies.  
[www.journeystothepast.com](http://www.journeystothepast.com)

### Blind Drum Stalk

Kiana Jenkins

Step out of your comfort zone and blindly walk through the forest, following the beat of a drum. Through this workshop, you will become more attuned to thyself and your environment. By removing your dominant sense, sight, you have the chance to heighten your other senses. Learn to move in a way that enhances your awareness and fosters more trust in your connection to the earth.

### Structures and Behaviors

Emilie Lygren and Kevin Beales

Observing an organism for an extended period of time can be a rewarding learning experience that helps students develop a meaningful relationship with the natural world. It's also an opportunity for them to engage in science practices and deepen understanding of key science ideas. Come participate in Structures and Behaviors, an NGSS aligned BEETLES activity that helps students develop a definition of adaptation that includes both behavioral and structural adaptations as they observe organisms the local ecosystem. Walk away with strategies to get students stoked about observing and thinking about the adaptations of critters anywhere.

### Shinrin Yoku

Paul Grafton

I will introduce the Japanese Practice of Shinrin Yoku (which translates to "Forest Bathing") to participants, including the latest research on the health benefits of being in nature. I'll share what the research says about how being in nature effects our mood, immune system, and stress levels. Lastly, I'll share activities that can deepen students' connection to the natural world.

### Art of Questioning

Sam Breyfogle

This workshop offers educators a powerful experiential technique to foster curiosity and deeper connections to nature. It also offers a theoretical framework for understanding how being intentional about the ways and kinds of questions we ask accomplishes this goal. This workshop will incorporate a demonstration, two hands-on activities, activity debriefs, and lecture.

### Mind Mapping; An Educator's Tool for NGSS and Thematic Teaching

Emily Mallen

Manifest your perfect day with art, organization, and fun! We will talk and learn about how to incorporate overarching themes for your teaching day, build successful schedules, and create art that you can share with your students. You take home tools to help you organize and make your lessons more meaningful.

### Sunday Morning Storytelling for Education and Entertainment

Dean Thompson

Storytelling was one of the original forms for teaching humans, transferring culture, imparting morals and providing entertainment. Come learn how to become a more effective storyteller and gain ideas for using

storytelling in an educational setting. We will discuss and share traditional stories and also focus on generating stories from personal experiences and how to incorporate storytelling into teaching about science and the environment. Come prepared with questions about storytelling and perhaps a short story to share as well

#### Pause with Purpose

Gregg Parker

Engaging students in contemplative writing/drawing like John Muir or Jane Goodall inspired journaling. Here we will look at samples of student journaling gathered from residential outdoor ed. setting over approximately a 15-year period. Framing, execution and de-brief of this activity will be laid out and then tested on ourselves.

#### Fire Tag – A Playground Science Experiment

Tim Handley

Fire Tag is a participatory playground science experiment about California fire ecology. Come learn the game, play the game, and grow your understanding of ecology and game-based learning. You'll leave with a new hat for your head and a new tool for your outreach arsenal. Fire Tag was an Official Selection at the 2016 International Festival of Independent Games, and addresses a number of key NGSS concepts and practices.

#### Ornithology for All: Teaching Kids about Birds

Erin Rawls

No matter where you live, there are birds all around! This workshop will focus in on discussing activities that help students to learn and get excited about birds, including tips on getting children to be able to use binoculars. Bird nerds, come ready to share your favorite bird-related activity and bring your binoculars, so we can end the workshop by going on a short bird walk!

#### NSI: Nature Scene Investigators

Kevin Beales and Emilie Lygren

Nature is filled with mysteries, and it's huge fun to give students the tools to notice these mysteries, and to try to figure them out. This activity sets an exciting tone of exploration and discovery, encouraging an inquiry mindset in students that helps establish a community of curious, active learners. It's an opportunity for an instructor to coach students in inquiry skills, respectful discussion, language of science, and how to make evidence-based explanations.

#### Then What Happened? A Storytelling Hike

David Benterou

Stories form guiding narratives to make meaning out of our world. In this story-telling workshop, we will take the ordinary and form silly and eye-opening stories which help us remember the actors (organisms) and their setting (environment). Come prepared to be creative and build your own nature story!

### **Strand 2: EDUCATION IN THE AGE OF TECHNOLOGY - Presentations in this strand discuss how technology may be integrated into educational programming as a tool for change.**

#### Beach Walk Bioblitz

Zach Plopper

Join WILD Coast for an interactive beach walk during which you will learn about marine protected areas, marine science, marine conservation, and coastal and marine education! Download the iNaturalist app and create an account before you come to participate in a citizen science-based bioblitz that you can then use with students in both coastal and terrestrial ecosystems. Participants will also get a sneak peek at a special citizen science opportunity that will be available to AEOE members in the coming year!

#### Tools, Not Distractions: Opportunities for Contributing Meaningful Data to Scientific Studies

Sarah Angulo

Many naturalists believe technology and nature don't intersect. But what do our own discomforts prevent us from sharing with students? This presentation will show you how students of the UC California Naturalist certification program use technology in the field, what initiatives they contribute to, and current results. The group will have a chance to idea share and discuss challenges for implementation. We hope to inspire you to face your fears and allow your students to engage with technology on the trail!

#### Getting Social with Science – Using New Social Media Platforms

Alex Feltes

Since society's dependence on social media only continues to grow year after year than why not take advantage of these platforms? By using new forms of media as an instrument of knowledge can we better inspire younger generations to explore the natural world rather than the virtual one? Come join the discussion to see how educational sciences can adapt in this new technological evolution.

#### Citizen Science: Improving Wildlife Conservation and Research in the Modern Age

Matthew Bearden

This workshop will involve discussing current citizen science programs and applications and how this can be used to engage students and communities with wildlife research and conservation. We will go over programs such as iNaturalist and eBird while also providing an opportunity for participants to share their own experiences and suggestions for engaging communities and students with citizen science. Participants will be able to learn about the potential benefits of citizen science, the scientific methods used in citizen science projects, and how citizen science can be improved to help engage communities with scientific research and conservation.

#### Interdisciplinary Activities for the Anthropocene

Rachel Payer

Scientists are now referring to our current geological age as “The Anthropocene” to emphasize the impact that humans have had on the land, seas, climate and wildlife over the past 200 years. In this hands-on session, participants will discover classroom activities and interactive online resources to help students explore different aspects of the Anthropocene including human population growth, climate change, changes in biodiversity and land use. The presented activities build knowledge and skills in life and social sciences, while applying learning to authentic problems.

#### Creativity and Nature Photography: Capturing the Process

Cordele Glass and Andrew Martin

For this workshop we'll be blending the science of Creativity and Positive Emotions with the natural beauty of Malibu's Coastal Chaparral. We'll be doing activities throughout the workshop that will help us paint a better picture of how the creative process unfolds, and we'll practice our new understanding of creativity with some nature photography! Be prepared for some light hiking, and some heavy beauty.

#### Night Walk, Star Talk

Shannon Diaz

Are you ever at a loss of words when students ask you which constellations are up above you on your night hike? Never fear! Come explore the StarLab indoor planetarium to learn about some stars, constellations, and stories to go with them. This will be a hands-on collaboration workshop where we will get to swap star and constellation stories inside the StarLab and be able to share different activities to enhance your overall night hike astronomy lessons.

**Strand 3: SCIENCE AND SOCIETY - Presentations in this strand discuss how outdoor and environmental education can help science permeate into society. Topics in this strand may include techniques for translating short-term experiences into long-term attitude and behavior change, engaging community stakeholders, and creating better citizens.**

### Freelancing in Informal Education

Tania Marion

Freelance informal educators who address plants, nature, and related topics have the opportunity to create change in many different settings. How do freelance informal educators contribute to lifelong learning in communities? This is the focus of the project, "The Freelance Condition & Lifelong Learning in Communities". Do you work one project, one event, or one gig at a time? You are invited to participate in this conversation and to share your story.

### Beyond the Lesson Plan: Guiding Students to Environmental Stewardship

John Sanders

Nature awareness involves engaging all the senses, understanding natural cycles, and the interconnections between organisms within various systems. Nature awareness is not acquired knowledge through lessons, but a process that leads students to become naturalists, instead of casual observers. This session will be a cooperative activity in which participants will share their own experiences and motivations for becoming naturalists, and how those experiences inform their strategies for engagement beyond the confines of the lesson plan and promoting environmental stewardship among the next generation of citizen scientists.

### Earth Dance

Vaiola Navarro

Earth dance is an activity that helps participants develop a sense of respect and awareness for different ethnicities and cultures. It is a hands-on activity that requires a lot of movement and willingness to learn different dances from around the world! Participants will need to wear shoes to dance in and a silly fun attitude!

### Empowering Youth through Gender Inclusion

Mary Hanrahan

This presentation will cover the history of gender stereotypes and the effect they have on student's development. The discussion portion will encourage participants to gain a better understanding of gender bias and evolving concepts of gender identity. The workshop will provide methods and resources to create an open and inclusive program for students of all gender identities.

### Compost this Mother Nature

Kris Cram

Are you getting the most from your compost system or still sending organic material to the dumpster? I recently partnered with our Food Service team and have begun composting more dumpster destined food than ever before. We feed what we can to our chickens and pigs but anything that is too far gone can always be composted. If you've had problems or issues with your compost system bring the questions and we can look at causes and solutions, so we can show students a regenerative alternative to our modern waste disposal system.

### Wolves and Fire: Myth, Legacy, and Truth in Ecology

Daniel Schillo

Participants will experience and share how story telling has shaped perspectives of the natural world. With a focus on fire ecology and the wolf legacy participants will undergo a collaborative and round table approach to delve into where myth meets reality. Together we will examine how one of the world's oldest artforms can help propel a powerful perspective of ecology.

### Making Science Camp Last All Year!

Michael Jacobus

With the proper planning, selecting the right camp program, and adding building on experiences during outdoor ed, students can become engaged, and stay that way, throughout the entire school year.

## Wolves and Us

Barri Brennan

Wolves have returned and continue to return to the environmental landscape of the lower 48, where they were once completely extirpated. Public opinion and support, along with the Endangered Species Act, has helped sustain the return of the wolf. Because wolves hold a particular mythical space in the human mind, education about wolves has become more important and necessary to help protect the wolf. Science needs to be the director of the wolf's fate, not superstition. This lecture will discuss the historical narrative of the wolf, provide the audience with basic biological and social facts about wolves and talk about wolves in present day North America.

## Their Minds on Environmental Education: Using Psychology to Make Teaching Have Impact

Samantha Bingham

We always search for ways to make outdoor experiences memorable - why not tap into the science of our minds on environmental education? This lecture and subsequent discussion workshop will introduce recent developments in environmental psychology to help our teaching impact students after they've left our classrooms. By discussing three categories of tools to improve our teaching styles and takeaway examples of how to implement, we will end with cooperative discussions that empower each of us to create a way to environmentally engage our students.

## **Strand 4: BRINGING THE OUTDOORS INTO THE CLASSROOM - Presentations in this strand center on integrating outdoor and environmental education into formal education curricula.**

### Get to Know CA's Environmental Principles & Concepts

Helen de la Maza

What?! California has Environmental Principles & Concepts? You bet! Not only that, they were adopted in 2004 and are now integrated into CA's new Next Generation Science Standards-based Science Framework and CA's new History-Social Science Framework. This is a great opportunity for outdoor / environmental education programs and classroom teachers to integrate them into programming as they will motivate your students and enhance your curriculum. Get to know the EP&Cs!

### School Yard Habitat

Melissa Moser and Chris Dellith

During this workshop a teacher and USFWS employee will explain and describe the process for a public school to implement a School Yard Habitat on campus

### Worms in Your Classroom

Caroline Bargo

In this interactive, hands-on workshop, Explore Ecology Garden and Environmental Educators will discuss best practices with teachers for composting on school campuses. Teachers will work in small groups to build a classroom size Vermi-Compost (worm) Bins for collection of food scraps from student lunches and snacks with simple everyday items. Worm Bins built during the workshop will be raffled off to attendees for use in their classrooms. We will demystify the compost process and share NGSS and Common Core connections between composting and classroom instruction. And there will be worms, and all kids love worms!!

### Engaging Ecosystems Everywhere!

Crystal Shalmo and Sandra Fields

We will be exploring ecosystems through hands-on activities and collaborative discussions. These explorations are designed to develop relevant resources, spark curiosity and provide a clear path to mindful inquiry. During this session participants will discover connections to colleagues and the environment. Exploring surrounding

ecosystems, participants will learn and share ways to integrate local ecosystem assessments within the classroom.

#### Planning Your Units with the Environmental Principles and Concepts in Mind

Tascha Barnes

In the state of California, teaching about the environment and conservation is now part of the science framework. Learn how to incorporate the Environmental Science Principle and government recommended teaching materials into your everyday lessons. Bring a teaching partner and plan your lessons and units together using this step by step unit planning workshop.

#### Nature Connections with Feathered Friends

Tyler Cash

Feathered Friends is best suited for educators reaching children in the kindergarten through sixth grade age range. These are a set of activities that offer a quick opportunity to get kids connected to nature and birds. This workshop is an extender for current curriculum, and incorporates the overarching Next Generation Science Standards. This workshop will be part lecture, part hands on and hopefully some discussion!

#### Hands-on with Systems and Ecosystems

Tim Handley

Most environmental injustices are a result of our failure to understand the complex consequences of our actions. With stories, art, and hands-on model-making activities, the Systems and Ecosystems program helps students to learn about the structure and function of ecosystems, what it means for plants and animals to be interdependent, and how the consequences of our actions ripple outwards through the natural world in unexpected ways. Come learn about this new, colorful, playful strategy for helping students to understand these critically important concepts about systems and ecosystems.

#### Putting the Literacy in Ecoliteracy: Teaching Environmental Books

Melina Sempill Watts

Many high school students' readings are often tightly focused on textbooks and classics of English literature. How can we integrate environmental books into our curriculum? Reading full length environmental books allows students and teachers to look at environmental history, environmental science, policy, sustainable agriculture, traditional cultures' environmental values and the innovative approaches to ecology embedded in fictional narratives.

**Strand 5: LEADERSHIP FOR A GREENER TOMORROW - Presentations in this strand focus on leadership skills and techniques that create better staff, make for more progressive programming, and create a more engaging environment for participants at all levels of outdoor and environmental education.**

#### Using Your Passion to Create Programming

Olive Poulsen

What are you passionate and excited about? Do you have big (or small) ideas on programs, activities or lessons to create a bigger impact on students? In this workshop, we will be discussing how to propose, plan and implement new programming to your outdoor ed. You will have the opportunity to discuss things you are passionate about, learn about the process of turning these dreams into reality and then have time to begin a planning process of your own for your new kick-butt program/lesson/activity! If you are excited about macro-invertebrates, teen programming, challenge course or anything else that makes your socks go up and down, walk away inspired and ready to take on the world!

#### Equity, Inclusion, and Cultural Relevance in Outdoor Education

Celeste Royer

Introductory workshop. Participants will explore their own cultural competence and will become more aware of their relationship to power and privilege. Participants will reflect on how well their outdoor education programs address Equity, Inclusion, and Cultural Relevance. Based upon their discussions in the workshop, participants may choose a personal action to become more knowledgeable in this topic and possibly consider changes to suggest to their program leaders that promote more equity, inclusion, and cultural relevance in their outdoor education program.

#### Fostering Community with Team-Building Games

Maxwell Lewis and Danny Hulburt

In order for our students to have a successful time at any type of Outdoor School or Science Camp, they must be comfortable with their group and community. We will model some team building games that promote team building and community development amongst a group of students, and discuss strategies for student reflection to strengthen their newly connected bonds with their peers and community. These games will be valuable because they will move the emphasis away from winners and losers, but rather building group cohesion. Not only will these games be a valuable experience for your students, they'll be a lot of fun too!

#### The Power of Choice

Bill Thornton

We will explore strategies to ensure we as facilitators and naturalist are keeping true to the principle challenge by choice. We will also learn strategies to promote participant choice and ownership in our programming.

#### Action Through Empathy

Kathayoon Khalil

The aim of this workshop is to explore empathy as one affective tool to inspire conservation action in our institutions and providing opportunities for cross department collaboration. Conservation action depends on different factors all coming into alignment. It is necessary to consider barriers, incentives and internal motivations. Empathy is one of those internal motivations. Having empathy towards nature and wildlife is important in predicting an individual's willingness to take conservation action. To continue to improve the quality of our programming, it is valuable to understand how empathy is developed towards wildlife in research, other organizations and in our own organization.

#### Creating a Culture of Personal and Professional Growth

Kat Montgomery

When those of us who manage staff provide them with opportunities to grow, everyone benefits. Our staff become more confident and capable, the quality of our programs goes up, and our customers have a better overall experience. Join other supervisors as we discuss how to create a culture of personal and professional growth within our teams.

#### Growing Leaders: Developing Strong Leaders from the Ground Up

Morgan Boaman

During this hands-on workshop you will have the chance to explore and grow your understanding of leadership development. Through a multi-level process, participants will learn about themselves as leaders, how to grow stronger leaders within their organizations, and have the opportunity to express their creativity through construction using marshmallows and other unique supplies! To conclude our session those in attendance will participate in an open floor discussion about how to take the lessons learned back to their organizations.

#### The SEL-ing point of EE: Social Emotional Learning

Robb "Big Brown Bat" Stolberg

I will share some background on Social Emotional Learning and engage participants in a discussion of how we as Environmental Educators already promote social and emotional learning (SEL) in our programs and how we can



do so with even greater intentionality. We will continue the dialogue with how we may measure SEL outcomes and use that to promote our programs.

### Networking, Professions, and Values

Melissa Skirkanich

I would like to use this workshop as a way to connect different people with different jobs/backgrounds! My intent is to create a master list of certifications and/or hard skills that different people have to provide networking opportunities if someone present desires that certification (WFR, Project WET, LNT, etc.). In addition, I would like to have a discussion on the values that individuals have when looking for a job - what are your wants vs. your needs? Do you need health insurance? If so, that might affect which jobs you can/cannot apply for. Do you want a certain salary? What about location? The purpose of this workshop is to get people thinking about what sort of job they desire in this stage of their life, and maybe start to recognize if/when/why those values might change. In addition, I would like to talk about the soft skills that people have and include on their cover letter/resume that can help them get a job (teamwork, risk management, problem solving, etc.). Finally, I would love to create a master list of jobs that people have held and where, to create a big sort of networking list. For example, I saw that Tyler was an assistant curator at a natural history museum. That is so cool and something that I might be interested in, so I am going to contact him/find him so that I can chat with him about it.

### Conflict Resolution Strategies

Clare Rankhorn and Mary Kristina Waite

Do you work at a residential program? Then you probably have had to facilitate conflict resolutions between students, cabin leaders, or staff. Join our workshop to gain or sharpen your conflict resolution skills! Participants will learn the steps to a conflict resolution, role play, discuss scenarios, and walk away feeling more confident in facilitating conflict resolutions.

### Safe and Seen

Addison Houck

In this workshop we'll explore and expand our language to become more intentional, inclusive, and empowering! In our time we are going to discuss and roleplay ways to make sure students, volunteers, and other staff members are feeling safe and seen, while critically thinking about how we can best support those around us. We will cover person first language, phrasing around disability/ability, gendered language, and how to navigate difficult conversations around these subjects.

### Fostering Community and Staff Retention

Roger Woerhle

A lecture and discussion on effective methods for building a strong staff community and its impact on retaining staff.

### Blackest Night

James Hempfield

What happens when the superhero needs saving? Will you answer the call? Join me and discuss ways to conquer our greatest weaknesses and keep the world safe another day. Saving the world is hard, but someone has to do it.

### Rookie Naturalist Survival 101

Alec Knapp

You've been hired as a Naturalist! Woo! So, how does one naturalize, exactly? Join Naturalist rookie Alec Knapp, now in his third season of environmental ed, in a tips-and-tricks session on making it through the first few chapters of your EE experience.

## Staff Morale – Have Some Fun!

Ryan Mayeda

Is it tough getting your staff through the doldrums of a long season? Attend this workshop if you want to learn and possibly share your own ideas for engaging staff through tough times, lifting their spirits and improving morale. Hopefully it's not too late to implement some of these ideas immediately after the AEOE conference at your programs! This workshop is intended for managers and other leadership staff who supervise and mentor instructors/counselors.