



Teton Science Schools
Connecting people, place, and nature through education.



PLACE-BASED EDUCATION SYMPOSIUM:
**YOUR LOCAL SCIENCE &
GLOBAL IMPACT**

FRIDAY, APRIL 25 | 4:00 PM-8:00 PM (MST)

WELCOME!

Welcome to the 10th Annual Place-Based Education Symposium at Teton Science Schools. This milestone marks a decade of collective dedication to connecting learners with their communities through the lenses of ecology, culture, and economy. What began as a celebration of local initiatives has blossomed into a global exchange of ideas, practices, and aspirations.

This year's theme, "Your Local Science & Global Impact," invites us to explore how localized learning experiences can resonate on a global scale. As we gather on the Jackson Campus, we honor the journey that has brought us here and look forward to the innovations and collaborations that will shape the future of place-based education.

Thank you for being part of this vibrant community. Here's to the next decade of inspiring curiosity, engagement, and leadership through transformative place-based learning.

AGENDA

Friday, April 25th @ 4-8 pm - Symposium!

4:00-4:15 pm

4:15-4:35 pm

4:45-5:10 pm

5:10-5:30 pm

5:30-6:45 pm

6:45-7:00 pm

7:00-8:00 pm

8:00 pm

Welcome & Opening & Raffle *(North Education Center with snacks)*

Lightning Presentations *(North Education Center)*

Student Project Overview *(North Education Center)*

Student Project Showcase
(Dining Lodge Breakout Rooms)

Dinner Line open *(Dining Lodge)*
Get dinner & find a seat

Keynote & Dinner & Discussion *(Dining Lodge)*

Break & Transition to Individual Presentations

Individual Presentations - 3 concurrent tracks of 4 individual presentations with 10 minutes for presentation and 5 minutes for questions & transition
(North Education Center & South Education Center & Dining Lodge)

Closing, Awards, & Afterparty *(North Education Center)*

THEMES

Exploring economies of place

- How might we bring more economic aspects of place into field teaching?
- What are our best successes integrating the economy leg of the Place Prism?
- What successes are we having teaching about the interconnections of the economy, culture, and ecology of place?

Bridging research & place (local ↔ global)

- What's the goal? Are we connecting to place as the spark/ inspiration to learn more about science?
Or are we learning about science to get excited to go outside and see science in action?
- How can local scientific investigations contribute to broader global environmental issues?

Impacts of place-based education: evaluation & research

- What is most impactful as we do place-based education?
- What data are we finding that is not supporting a place-based education?
- What new questions are we interested to answer?

KEYNOTE SPEAKER



Dr. Bryan Shuman, Wyoming Excellence Chair Professor in Geology and Geophysics, has taught at the University of Wyoming since 2007 and uses geological evidence to examine how climate change affects water resources and ecosystems. With his students and postdocs, he reconstructs environmental dynamics across North America since the last ice age to evaluate the full range of climate variability and to test the climate models used to make future projections. Their work also reveals the role of climate variability in past ecosystem changes, particularly in lakes and forests, from Wyoming to New England. He was co-lead of the 2021 Greater Yellowstone Climate Assessment and serves as one of the principal investigators leading the ongoing NSF-funded WyACT (Wyoming Anticipating the Climate Transitions) project, which aims to help Wyoming communities prepare for the future. Past awards include the William S. Cooper Award from the Ecological Society of America, the Henry C. Cowles Award from the American Association of Geographers, and an NSF CAREER grant. He was previously a tenured faculty member at the University of Minnesota, a NOAA Climate and Global Change post-doctoral fellow at the University of Oregon and studied at Colorado College and Brown University.

LIGHTNING STYLE PRESENTATIONS

Tim Gruber & Emma Downie

K-1st grade and 2nd-3rd grade teachers, Mountain Academy Teton Valley Campus

tim.gruber@tetonscience.org | emma.downie@tetonscience.org

The Ultimate Wydaho Activity Guide: Students positively participating in local marketplaces

This presentation details a 2nd/3rd grade project whereby we noticed kids' interest in marketplaces and desire to partake in a "real marketplace". Instead of a marketplace solely to generate profit, we challenged kids to think about how their products could fulfill a need in the community. This project culminated with the kids creating a book about activities in our area and selling the book at a real marketplace. All of the proceeds from the book got donated to our local Community Resource Center.

Carol Christ and Ali Salinas

Principal and Director of Curriculum & Instruction, The Fay School

christ@thefayschool.org | asalinas@thefayschool.org

Planting Knowledge: A Place-Based Journey Starting in Economics and Life Science and Ending at a Farmers' Market!

This showcase highlights experiential, hands-on, and engaging learning opportunities for 4th graders, integrating economics, literacy skills, and life science through a place-based unit. Students explore supply, demand, and profit while studying plant life cycles and actively caring for our school garden and chickens. The unit culminates in a meaningful trip to a local Farmer's Market, where students put their knowledge and experiences into action by selling their goods to the community.

Liz Middendorf

4-5th grade teacher, Academy for Global Citizenship

lmiddendorf@agcchicago.org

Urban Spaces for Place-Based Learning

This presentation will address the challenges of place based learning in an urban environment and present ideas for overcoming those challenges. This session will focus on utilizing local resources, authentic learning experiences, considering cultural perspectives, and changing mindsets.

Alex Sivitskis

Professional Learning Coach & Education Research Faculty, Teton Science Schools

alex.sivitskis@tetonscience.org

Exploring Place Through Time: Satellite Imagery for Place-Based Education

Understanding how a place's ecology, economy, and culture evolve over time is essential to meaningful place-based education. With the growing accessibility of satellite imagery and analytical tools, educators can now bring the past, present, and future of a place into focus. This session will showcase free, easy-to-use resources that help learners visualize and analyze temporal changes, deepening their connection to place and revealing the interwoven stories of environment, society, and economy.

STUDENT PROJECT SHOWCASE

H is for Hiss, P is for Purr: How Cats Connect Economy to Community

Student: Sierra Fern Gessford

School: Homeschool

Teacher: Kate Gessford, Professional Learning Coach, Teton Science Schools

In kindergarten, Sierra crafted the driving question, “How might we take care of cats and kittens so they will be healthy and find homes?” and responded by developing community partnerships with a local artist and animal shelter. Over the course of two years, Sierra researched, wrote, illustrated, and self-published a picture book for kids entitled, “H is for Hiss, P is for Purr: How to be Your Cat’s BFF Forever,” which is now for sale on Amazon. All proceeds will be donated to animal shelters around the world; books will be available for sale at the student showcase. By following a child’s interest, there is enormous potential to develop agency and grow changemakers at a very young age.

Nature Journaling in Place

Students: Bella Wilson, Andres Irvine, Phoebe Scott, Piper Gaughan, Olivia Russ, Maysie Bell, Travers McGaugh, Donovan Freitas, Nico Peterson-Olivares, Luca Irvine, Liza Mayer, Abigail Russ, Ethan Schupman, Peter Mayer, Koven Post-Holmberg, Revi Kleyman, Greta Nydam

School: Teton Science Schools, Mountain Academy

Teacher: Matt Bisk, Teacher, Mountain Academy

Students have been completing weekly nature journals throughout the year. They have had a “sit spot” in their backyards that they have tracked over time. Students have used this spot to explore both changing weather and weather patterns and made connections back to climate change. They’ve also used their observations to invite questions that connect to both the local ecosystem and larger ecosystems throughout the world.

3rd - 5th Grade Student-Directed Inquiry-Based Science Research Projects

Students: TBA

School: Munger Mountain Elementary School

Teacher: Kelli Petrick, Science Teacher

3rd: Students built and used weather collecting instruments as an introduction to weather patterns. We then learned about the place triangle to understand the uniqueness of Jackson. Each class of students then studied either avalanches, droughts, wildfires, or floods. Utilizing all of this background knowledge, we explored how a change in climate might impact these natural disasters, potentially increasing their intensity and/or duration, and thereby impacting the ecology, economy, and culture of our town. Focusing on one aspect of place, students were then challenged to work in teams of 3-5 to design a novel invention to help combat the effects of these disasters. Students completed presentation templates, including a drawing of their design, and used up-cycled materials to build a small prototype of their invention. All students presented their posters and prototypes at an all-school event on March 13. The project connects to the symposium themes of exploring economies of place through the teaching of the place triangle and the theme of bridging research and place by connecting to place as inspiration to learn more about science.

4th - 5th: In small groups of 3-5, students utilized the science circle to create, test, analyze, and present an inquiry-based science research project. Students learned about testable and non-testable research questions, variables, the constraints of cost and time, compromising with teammates, and how to present their projects in an engaging way to a K-adult audience. These projects connect to the symposium theme of bridging research and place by having students acquire the skills needed to complete their own scientific investigations so that they can continue to learn about and understand the world around them (both local and global). Understanding the process of science will allow these students to connect to our place on a more robust level, and inspire them to continue to use the science circle to explore the world around them.

STUDENT PROJECT SHOWCASE

Student: Andy Schilling
School: Jackson Hole Middle School
Teacher: Hunter Jones, Teacher, Jackson Hole Middle School

Students are still in the process. Question posed to students to create their own questions was “What positive difference do you want to make in our community?”

Andy’s Question: How could we increase the amount of people on bikes, walking, and using public transportation in Jackson by the end of the school year?

How can we spread awareness about the dangers birds face and help save them as a species?
Students: Ellie Hunt & Atten Aronowitz
School: Jackson Hole Middle School
Teacher: Hunter Jones, Teacher, Jackson Hole Middle School

Up Styling Jackson, Wyoming
Students: Sawyer Stevens & Trip Overbay
School: Jackson Hole Middle School
Teacher: Hunter Jones, Teacher, Jackson Hole Middle School

Up styling in Jackson Wyoming is about convincing people that reusing clothes and donating clothing is cooler and better for the environment. It gives you more opportunity for fashion styles at a low cost. We are going to create a documentary to show the greater opportunity of thrifting.

How can we make younger generations more educated around food waste and how important it is to grow whole and healthy foods ourselves?
Students: Joy Hayashida-Ludington, Maya Brettell, & Naveah Thompson
School: Jackson Hole Middle School
Teacher: Hunter Jones, Teacher, Jackson Hole Middle School

Our idea for a sustainability project is to partner with the elementary school kids (Primarily Colter Elementary) to encourage them to use our greenhouse and educate them around food waste and sustainability and maybe encourage them to create their own garden/greenhouse program.

How can we create clothes from unwanted fabric and get people to be excited about buying pre-loved clothes?
Student: Lena Estay & Drew McPeak
School: Jackson Hole Middle School
Teacher: Hunter Jones, Teacher, Jackson Hole Middle School

When you donate your clothes, you think you’re keeping them out of the landfill, right? Wrong. Most of the clothes that don’t get sold go to landfill anyway. Our mission is to take unwanted clothes and turn them into high-quality sustainable clothing, taking unwanted fabric and turning it into something new. Our goal is to show people that you don’t need to buy new clothes to be happy, and if you do, you can choose something that’s better for the environment. We are going to use our creative ideas to create new outfits made from unwanted clothes, keeping them out of landfills.

The Effects on Wyoming Wildlife
Student: Summer Maestras, Ella Snider, Vanessa Jimenez Solorio
School: Jackson Hole Middle School
Teacher: Hunter Jones, Teacher, Jackson Hole Middle School

I want to make people, especially tourists, more aware of their impact on wildlife when they visit. We can do this by going to schools and talking to them. We can also go to the airport and create some type of video, message, poster that publicly announces the message.

BRIDGING RESEARCH AND PLACE

Science, Soil, and Sustainability: Place-Based Education in the Alabama Black Belt

Dr. Chet Nicklas

Director, University West Alabama Black Belt STEM Institute

cnicklas@uwa.edu

This presentation will highlight how the University of West Alabama's Black Belt STEM Education Initiative (BBSEI) is advancing Place-Based Education (PBE) throughout Alabama. Beginning with hands-on, immersive sessions led by TSS, the initiative is cultivating local science knowledge and empowering communities. The effort culminates in the Alabama Youth Action Sustainability Summit, where students from across the state come together to address sustainability challenges and develop solutions rooted in their own local contexts, fostering both local and global impact.

Native Texas Animals: Literacy, Science, History, and Art through the Lens of a Riparian Zone on the Buffalo Bayou

Scott Cunningham

2nd Grade Teacher, The Fay School

scunningham@thefayschool.org

Knowing that a coyote walked through campus thirty minutes before carpool will change any child's relationship with the surrounding landscape, even if that sighting occurs in the fourth largest city in the country. Elementary students from the earliest ages benefit from an investigation of the local fauna in their state and the dangers that threaten their survival. This presentation catalogs a second grade classroom's attempt to answer the question: How can we take care of our native animal neighbors?

Empowering Young Environmental Leaders: Implementing Sustainability at The Fay School

Emma Peterson

5th Grade Teacher & Upper Elementary Department Chair, The Fay School

epeterson@thefayschool.org

This session highlights the power of Place-Based Learning in engaging students with real-world environmental challenges within their school community. Attendees will explore how The Fay School's sustainability initiative empowered students to investigate their ecological footprint and propose actionable solutions. Through hands-on data collection, expert interviews, and student-led advocacy, participants will discover strategies to connect the curriculum with local environmental issues. The session will provide practical tools for designing place-based projects that foster student agency, cross-disciplinary learning, and long-term impact.

Rediscovering your Backyard: How One Map Can Deepen Your Connection to Place

Reid Bauer

Interim Director of Information Technology, Teton Science Schools

reid.bauer@tetonscience.org

Can a single map be enough to reconnect you and your students to your community? Learn how one map could be the only tool you need to embark on a year of micro adventures in and around your home, exploring all three sides of the place triangle (Ecology, Economy, & Culture) at the local scale.

EXPLORING ECONOMIES OF PLACE

Passion Project

Lauren Starke

Curriculum Integration Specialist, Grand Rapids Public Museum School

starkel@grps.org

Discover how scholars are driving meaningful change in their communities through the design thinking process. In this session, scholars will share how they identify issues they're passionate about, conduct thorough research to deepen understanding, and collaborate with community partners to implement real-world solutions. Attendees will gain insight into the brainstorming, research, and action phases of the project, with a focus on how scholars are using strategic partnerships to create lasting impact.

Bring Back the Bison

Catherine Maguire

Director of Education at History Jackson Hole

catherine@jacksonholehistory.org

Bring Back the Bison is a lesson that tells the story of life for Shoshone Native Americans before homesteaders entered the scene and changed everything, what those changes were, the ramifications of the changes for not just the Native Americans but also for the bison species itself, the policy that started to solve the problem but couldn't turn back the clock entirely, and the modern efforts to finish the work and bring bison from YNP back to native lands. This lesson centers on differentiating between want and need, includes angles on scarcity and choice and includes a bit on supply and demand, all of which are base layers for economic study for young people who get to learn these sometimes otherwise heady and dry topics in an engaging hands on lesson with artifacts like bison bladder water bottles, literature by local author Jean Craighead George that features beautiful imagery, and ends in a call to action of what can we learn from the past but mostly what can we do in the future.

Innovation as Emergent Strategy: Empowering students to shape change through invention & research

Laurel Bingman

Invention Education Fellow at the Society for Science

lbingman@societyforscience.org

In her book, Emergent Strategy, Adrienne Maree Brown presents a theory of change based upon principles of biomimicry - the idea that we can look to nature for inspiration as we shape the ever-present reality of change. As educators, how might we prepare students for their roles as change-shapers & participants in economies of place? One powerful emergent strategy that centers student interests & community needs is the act of creating space for students to take the lead in invention & research education experiences. This session will illustrate the importance of encouraging innovative mindsets and provide practical examples for how to do so with students both inside and outside of the classroom.

Gift Economy and Reciprocity at a Place-Based School

Yuri Baxter-Neal and Gail Baker

Field Work Coordinator, Cottonwood School

yuribaxterneal@thecottonwoodschool.org | gailbaker@thecottonwoodschool.org

Are you ready to explore a new vision for the economy—one rooted in reciprocity, care, and community? What if a true economic system starts with how we care for the Earth and each other. Join us to see how our 8th grade capstone and service-learning projects are not just shaping students, but also strengthening local economies in sustainable, meaningful ways.

IMPACTS OF PLACE-BASED EDUCATION: EVALUATION & RESEARCH

Place Based Education in the Art Room

Michelle Visser
Art teacher K - 8, Snowy Range Academy
mvisser@acsd1.org

This presentation shares examples of how a place-based approach has been utilized in the art classroom in two different schools in southeast Wyoming. Choice-based art created around the themes of local birds, the Northern Arapaho, and the Casper Aquifer are the products of these place-based investigations increasing student awareness of their environment and empowering them to become advocates in the face of climate change.

Snowtography and Science Communication

Julia Olson
Field Education Program Coordinator, Teton Science Schools
julia.olson@tetonscience.org

As climate changes, Wyoming's ecohydrological regimes are shifting. Teton Science Schools Field Education is working with the University of Wyoming to study these shifts in the GYE using a relatively simple instrumentation suite, while using this suite as an educational tool with students.

The Power of Reciprocity: Building Community with Adult Learners through Place-Based Education

Sydney Vander Waerd
Lead Instructor, Teton Science Schools
sydney.vanderwaerd@tetonscience.org

In this presentation, you'll explore how fostering a reciprocal exchange of stories, experiences, and knowledge enriches the learning experience and builds lasting connections between participants and place. By incorporating traditions like asking "What were you doing at 27?", you'll see how deep engagement and mutual learning contribute to a global community of learners. You'll discover how these practices create a sustainable learning environment where participants become both learners and teachers, deepening their understanding of place, community, and the world around them. This approach not only enhances local education but also empowers individuals to take these lessons and share them globally.

Coming Full Circle with Place-Based Education: PBE exposure, continuation, and expansion

Addison Perryman
Conservation Education Director, Jack Creek Preserve Foundation
a.perryman@jackcreekpreserve.org

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SUMMER WORKSHOPS AND PROGRAMS



Teacher Workshop

May 3

In Mud: Nature-based Early Childhood Education

Get inspired to work with children in our natural environments through this in-person workshop!



Virtual Course

June 25

Introduction to Place-based Education: Asynchronous Virtual Summer Course

In this seven-week asynchronous course, participants will explore the theory and application of Place-Based Education. They will gain practical skills and tools to get started with a place-based classroom experience. Participants will learn how to use the local community as their classroom, guide students to make a positive community impact, connect standards to place, and build learner-centered experiences.



Teacher Workshop

July 3

Place-Based Education Deep Dive: Virtual Book Study

In this virtual course, teacher participants will have the opportunity to go deeper into topics of place-based education through a book study.

THANK YOU!

Help our community grow by posting about your symposium experience! Tag Teton Science Schools on social media and use the hashtags #PlaceBasedEducation and #TetonScienceSchools.

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Since 1967*