



PEI PACIFIC  
EDUCATION  
INSTITUTE

# *Community-Based Science, Outdoors*

2022-2023

ANNUAL REPORT







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*“I learned many things about fish species and plants, the environment, and how to protect the ecosystems and restore them. I enjoyed going out and doing field work and connecting with my peers and people in the natural resources field.”*

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# A MESSAGE FROM OUR LEADERSHIP

As an organization, PEI turned 20 years old this year. PEI's approach to education is grounded in a much older tradition of place-based, community-oriented education which has been part of cultures across time. As we come out of the pandemic, the social, emotional and academic value of being outdoors and connecting to nature is in the media and being supported by increasing research.

As we reached out to people who were instrumental in the work of PEI to capture stories of our journey as an organization, we found a common vision for communities that has been the basis for PEI's work and continues to guide the organization. Reflecting on the history of PEI, it is humbling to consider the people named and unnamed who have been part of this organization's development and it helps confirm that we are on a good path.

With support and collaboration from the PEI community, we continue to offer programming that is tailored to the school and community where it is being offered. Youth in our programs are collecting data in their communities and using that data to build maps and identify patterns that help them understand disparities and identify problems or opportunities to address. Youth are learning from people who work in natural resources and conservation fields, community leaders and elders as they plan projects to work toward increased biodiversity and environmental justice. They are developing skills they can put into action, implementing projects that support just and sustainable communities. The success of our youth is an indicator of the value and impact of this work.

PEI staff have tripled in numbers in the last five years. We are reaching more teachers and thereby more students in more communities than ever. There is an increasing demand for PEI's services. A recent workshop had over 100 participants meeting synchronously and asynchronously across the state. We know the value of smaller groups, in person, connecting deeply with each other and making sense of our relationship to the natural and human communities that we are a part of. We will continue to meet communities where they are, on their ground, to co-design ways to support youth as they become the future stewards of the places we call home. We are excited to continue this journey with all of you as we head into our next 20 years.

Sincerely,



A handwritten signature in black ink that reads "Kathryn Kurtz".

**KATHRYN KURTZ**  
Executive Director



A handwritten signature in black ink that reads "Marissa L. Rathbone".

**MARISSA RATHBONE**  
Board President



# VISION AND MISSION

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## VISION

PEI is a leader in promoting civic and scientific literacy by empowering people to make balanced, well-informed decisions for just and sustainable communities.

## MISSION

PEI supports educators by specializing in professional learning and FieldSTEM implementation.





# OUR VALUES

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## Equity

Accessible and culturally responsive FieldSTEM learning for each and every student.

## Diversity and Inclusion

Inclusive education that considers all perspectives and experiences when making decisions and designing solutions.

## Integrity

PEI values using reliable and trusted scientific resources to build relationships that contribute to a cohesive education system.

## Collaboration

PEI values developing and supporting partnerships that deepen student learning opportunities. making.



## Stewardship

Community-centered education that engages student voice in civic participation and community decision making.

## Creativity

Education that inspires innovation.





# OUR REACH

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89

## **workshops delivered**

Professional learning focusing on building educator capacity to get students outdoors.

4

## **ELA Performance Tasks translated**

Spanish versions allow dual language teachers to provide meaningful field experiences for Spanish-speaking students.

82

## **community partners**

PEI values locally relevant, career-connected learning. Engaging with the community is essential to the FieldSTEM Model.

177

## **participating districts**

Districts large and small value our programs.

37

## **counties reached**

Our programs reached counties across the state with locally-relevant learning opportunities.

8,779

## **STEM clock hours**

PEI is an OSPI-approved provider for Washington State Clock Hours for formal K-12 educators.

2,157

**EDUCATORS ENGAGED**

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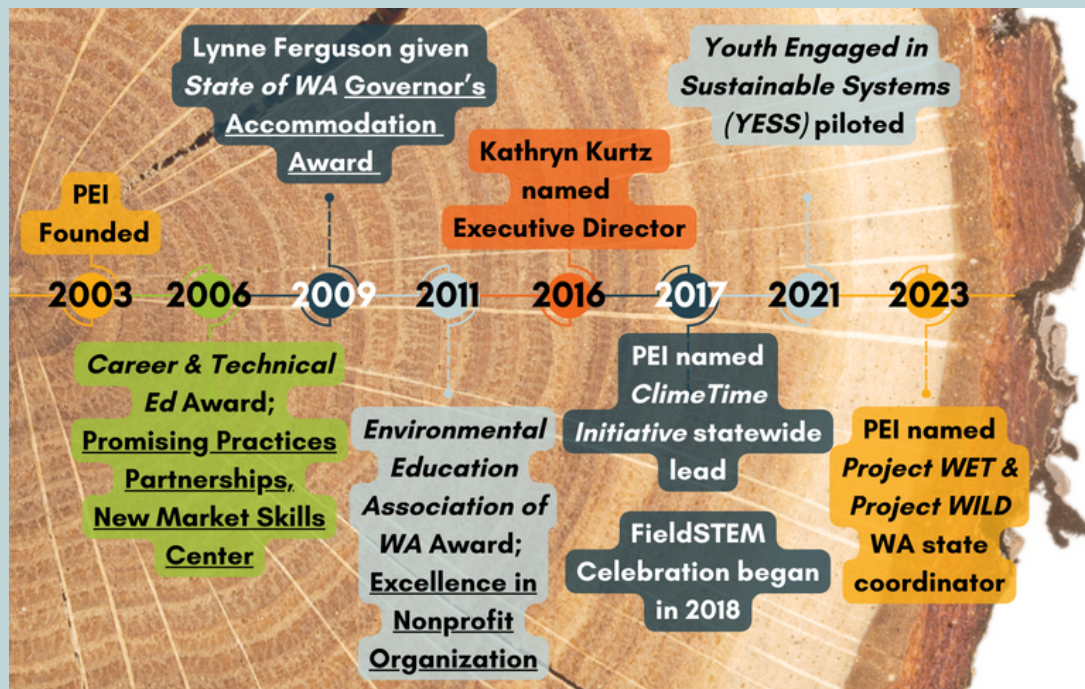
# 20 YEARS OF COMMUNITY-BASED SCIENCE, OUTDOORS

## The Origins of PEI – A History

PEI was born amid the confluence of two complementary circumstances: the need for locally relevant environmental education resources for K 12 teachers throughout Washington State and a strong desire within the timber industry and state agencies to help the public understand the ecological considerations – and benefits – embedded in their work.

In 2003, the good news was that the Office of the Superintendent of Public Instruction had an environmental education department. The department, however, had few resources and little manpower. “There was one dedicated person,” says PEI co-founder Lynne Ferguson. “It was a programmatic approach that reached only people where that person lived, and there didn’t seem to be any real statewide plan for environmental education.”

On the industry side, public perception was at a historic low. Retired Port Blakely President John Warjone recalls industry approval ratings hovering around 30%. “We were getting really bad press,” he says. “We concluded that we needed to do something to explain how the industry works and how we’re doing the best we can. We thought of having an association made up of Washington Forest Protection Association members.”





In the 1970s, WFPA hired Ferguson as the state coordinator for Project Learning Tree, an international forest-focused environmental education program, to lead the new organization. Aside from WFPA contributions, the first funding came through an Environmental Protection Agency grant to assess the work they were doing. "Those findings would contribute to the overall field of environmental education across the country," Ferguson explains. "

Dr. Margaret Tudor became a frequent collaborator. Tudor was the director of the Washington State Department of Fish & Wildlife, co-founder of Nature Mapping, and the statewide coordinator for Project WILD, an environmental education program focused on animal habitat and behavior.



Before long, it became evident that more partners were needed, according to Norm Schaaf. The former president of Merrill & Ring was a board member of WFPA in the early 2000s. "Our resources were stretched," he recalls. "We realized that long-term funding couldn't be provided entirely by our membership, so how do we move the program into an independent, nonprofit organization? We wanted to open it up to more groups but still maintain the integrity of the program. There was a careful selection of inviting people with shared interests." Organizations that joined included the Conservation Commission, the aquaculture and agriculture industries, and the Department of Natural Resources.

PEI officially became an independent organization in March 2003 with Ferguson as its first Executive Director. Later, Tudor joined Ferguson as Co-Director.



## Collaboration with Community Partners

From the beginning, PEI has been rooted in collaboration. Its board of directors in its early years as a nonprofit connected directors of the leading education associations and multiple state agencies with leaders in the natural resource management industries, an unusual and compelling combination.

“Our first few board meetings were extremely popular because these people had never met each other,” recalls Ferguson. “We had the Superintendent of Public Instruction, the director of the Department of Fish & Wildlife, the Washington State Principals Association, Northwest Indian Fisheries Commission, and representatives from several timber companies.” Ferguson also said of the early meetings, “One of our strategies was to never have a board meeting without an educator present. Our board would then hear directly from educators about what they were doing in their classrooms. That really energized everybody.”

In-house, Ferguson and Tudor were bringing Project Learning Tree, Project WILD, and Project WET together under one roof as the programs’ respective statewide coordinators. “We became strong by working together,” says Tudor.



Another EPA grant created an opportunity for Tudor to work with university professors running teacher training programs to incorporate environmental education. “Our interest was to bring Project Learning Tree and Project WILD into their training through state standards and an assessment,” Tudor explains. “These professors were very interested and thought it was an important aspect to include.” Those teachers/trainers later conducted PLT and Project WILD workshops around the state.



Even before PEI became an official organization, an important foundation of our work was centering our partnerships with indigenous tribes and leaders across the state. Ferguson worked with several indigenous partners including the Northwest Indian Fisheries Commission in the late 1980s to produce and publish *The Indians of Washington and the Environment*, which helps “students gain an awareness of tribal ways of life through exploration of historical and contemporary interactions with the natural world and non-Indian people.”

The collaboration continued through the creation and publication of the [Shadow of the Salmon](#) resource guide to accompany the video that follows a young Indigenous man as he learns about the history and environmental legacy of the Pacific Northwest. In recent years, PEI has partnered with indigenous leaders across the state to incorporate indigenous ways of knowing throughout the climate science materials: [Solutions Oriented Learning Storylines](#).



OSPI has also been a key partner. Ferguson and Tudor participated in Essential Academic Learning Requirements (EALRs) committees as advocates for the integration of environmental education with its own set of standards. “I was on the social studies committee, and we had someone on the arts committee,” says Ferguson. “We were very well received by the teacher groups that were carving out the EALRs because they saw how Project Learning Tree and Project WILD activities met the academic standards they were looking for.”



Along the way, PEI developed relationships with other groups, such as the Olympic Coast National Marine Sanctuary. The two organizations have been collaborating to deliver Ocean Science workshops to Olympic Peninsula educators since 2016. PEI has also been working with the Washington Invasive Species Council (WISC) since 2015 to develop curriculum and workshops that introduce educators to the many ways invasive species can be integrated into lessons. The partnerships benefit both organizations. For WISC, training teachers to educate their students about invasive species multiplies the number of people on the lookout for non-native plants, insects, and animals. For PEI's part, invasive species are a relevant topic that easily engages both educators and students.



## Early Work with School Districts: The Original FieldSTEM Model

To paraphrase Sesame Street, you might say that PEI's early educational model was brought to you by the letter 'i.' Words like 'inquiry' and 'integration' played a central role, and the model appealed to teachers because of its ability to integrate and incorporate multiple subjects and grade levels. Equally important, it took the fear out of teaching science by allowing educators to inquire along with their students rather than expecting them to be subject area experts.

As the Director of WFPA's environmental education program, Ferguson hired an Associate Director, Kathryn Kurtz, and two consultants, Pat Otto and Woody Franzen, to coordinate, offer the workshops, and provide implementation support to teachers. This move put the work on a new playing field as districts found the support incredibly valuable.





Nancy Skeritt was the curriculum director at Tahoma School District and attended an early Project Learning Tree workshop. Skeritt worked with the WFPA Environmental Education (EE) staff to help bring in neighboring Issaquah and Peninsula School District personnel, and although initially, PEI provided workshops at no charge, within a year, six districts were paying for the opportunity to train and support teachers. Kurtz, Otto, and Franzen worked with the districts to build matrices that showed how learning standards in language arts, science, social studies, and math were being addressed through outdoor learning activities.

WFPA EE staff joined committees at OSPI to continue to develop Essential Academic Learning Standards for science and, more specifically, for environmental education. "We went to Terry Bergeson, who was Superintendent of Public Instruction at the time, and she would make sure that everyone understood we were there to help incorporate the environmental education standards," says Ferguson.



One of the challenges was dealing with teachers who were already feeling overburdened and intimidated about teaching science, according to Bergeson. "Before you can get to making science come alive so that the student has a reason to learn it, there has to be respect for the teacher's fear that they don't understand it and they're going to look like a dope in front of the kids," she says. "How do we enter their frame of reference, just like we want them to enter the students' frame of reference? It's the same principle. We had to show them that it's okay to learn something new and not be ashamed."



The importance of school and district-wide support in alleviating those concerns and providing structural support was evident. The WFPA team would talk with administrators about the value of training their entire staff rather than individual teachers. "We built models of total school integration," says Ferguson. "We would also assess the learning as a result of that. In talking with districts, we would tell them, 'You could include all your grade levels and we'll gradually work with each of those teachers as to how they will work with each other and with different subject areas to integrate the model but also make sure that you change the topics and don't have redundant teaching.'"

Each grade level used local natural resources as the context for learning; one grade level might focus on how water is used, another on the benefits of forests, and a third on wildlife species whose numbers were depleted.



The response was enthusiastic, says Warjone. "We were surprised at how much teachers wanted to do this," he recalls. "We were supplying a lot of the information they could use as a teaching tool. To them, this was a big timesaver, and the information was accurate and peer-reviewed. That was an important aspect."

An opportunity in the late 1990s to take the work to the next level came when the State Education and Environment Roundtable, a collaboration of twelve state education agencies, began to address the value of using the environment as an integrating context for learning to close the achievement gap. WFPA's work became part of a national project to demonstrate that schools that worked to integrate learning specifically around the environment helped to close the achievement gap for underserved students.





In Washington, WFPA began working with the Washington Educational Research Association and the University of Washington to develop the Environmental Education Assessment Project (EEAP). The EEAP took the Washington learning standards and created performance tasks that allowed an educator to assess the student's competencies in multiple areas (math, science, and language arts). These performance tasks were given to students across Washington as part of a research project that demonstrated that students in schools that used the environment as an integrating context scored higher on state math, language arts, and science tests.

The demand for WFPA's EE services continued to increase and Ferguson, working with Tudor and the other lead partners incorporated the Pacific Education Institute (PEI) in 2003. PEI continued to refine the model of working with school districts to implement field-based K-12 learning. Pat Otto became the Program Manager and PEI continued to work with districts across the state to meet local needs. When Ferguson retired in 2011, Tudor continued as executive Director and coined the word "FieldSTEM".



In 2015, working with the Board of Directors, notably Mark Doumit, the Executive Director of WFPA, and others including Ellen Ebert, Director of Science Education at OSPI, Rep. JT Wilcox, and Rep. Sharon Santos, the legislature passed a proviso to support PEI to scale up the work of FieldSTEM. The proviso allowed PEI to expand staff by hiring a Program Director, Development Director, and PEI's First Regional FieldSTEM Coordinator, Julie Tennis. In 2016, Margaret Tudor retired and Kathryn Kurtz was hired to be the 3rd Executive Director.



# PEI'S CURRENT WORK & FOCUS

The FieldSTEM proviso challenged the organization to refine the FieldSTEM model. With a goal of designing, developing, and delivering high-quality PreK-12 professional learning and educational materials to implement FieldSTEM statewide, it was important to have staff in regions across the state. From 2016 to today, PEI has hired nine Regional FieldSTEM Coordinators who managed the schools, districts, and community partners for their regions. In addition to increasing capacity for and implementation of FieldSTEM, PEI has committed to continually improving internal operations to ensure effective processes and a welcoming and inclusive culture. This led us to key work to focus on diversity, equity, inclusion, and justice (DEIJ).



## DEIJ & Indigenous Communities

Collaboration, diversity, and inclusion are core values at PEI and our professional learning workshops foster culturally inclusive learning practices. In 2018 with the passage of a climate science proviso, PEI demonstrated its commitment to that work by centering each Solutions Oriented Learning Storyline (SOLS) on indigenous perspectives and experiences. Kurtz contracted with three indigenous educational leaders to co-design the process for developing and implementing SOLS.

The work calls for educators to reach out to their local tribe, to build respectful and authentic relationships with the tribe and at least gain an indigenous perspective. PEI modeled this at workshops by having local speakers from a tribe within the region present or host a portion of the workshop on tribal land. Nearly all participants in SOLS workshops report that the workshops leave them better prepared to use instructional practices that make learning experiences more inclusive for indigenous students.





In 2018, PEI required all staff to attend the OSPI Since Time Immemorial training, a demonstration that the organization was committed to having staff that understood and could speak to tribal sovereignty. In 2019 PEI's program coordinator Nicole George led work to create a guide for land acknowledgement practices in PEI's work. PEI began the process of updating the hiring process, specifically adding language to our recruitment announcements that made applications more accessible and welcoming to historically underserved populations.

In 2020, PEI established a committee that consists of PEI leadership, staff, and board to ensure PEI continued to address Diversity, Equity, Inclusion and Justice (DEIJ) at the individual and organizational level. The committee worked to update the organizing language (vision, mission, values) through the strategic planning process. The committee's purpose is to hold regular meetings to move forward the DEIJ work, to formalize and demonstrate our intentions of becoming an anti-racist, anti-oppressive organization, and to actively challenge racism and oppression and the policies and practices that uphold them.

PEI is currently working with OSPI to gather data on the schools and districts we serve, as we intend to target the most underserved, and those with the least resources. Currently, PEI reaches 68% of the least-served districts in the state.

## 21st-Century Skills, Standards, & Career-Connected Learning





FieldSTEM has always had a career-connected learning component but in recent years the work of developing green job pathways for youth has expanded. In 2017 PEI Executive Director Kathryn Kurtz led work with the Pacific Mountain Workforce Development Council to begin working with a collaboration that included OSPI, school districts, community colleges, Tribes and employers to build a CTE framework that would be statewide and allow for local adaptation. The first framework was launched in 2018 and PEI has been refining this process since. PEI hired a Green Jobs Coordinator in 2022 and an Associate Director of Green Jobs in 2023 to oversee two key initiatives: including statewide Career and Technical Education (CTE) frameworks and the Youth Engaged in Sustainable Systems program in our FieldSTEM work.

For the past two years, Kurtz, Associate Director of Green Jobs Heather Spalding and Townshend have been convening teams to develop more CTE frameworks for statewide use. Through the courses, students can earn high school credit, job skills, a degree of competency from a local employer and in some cases, dual credit at regional colleges.

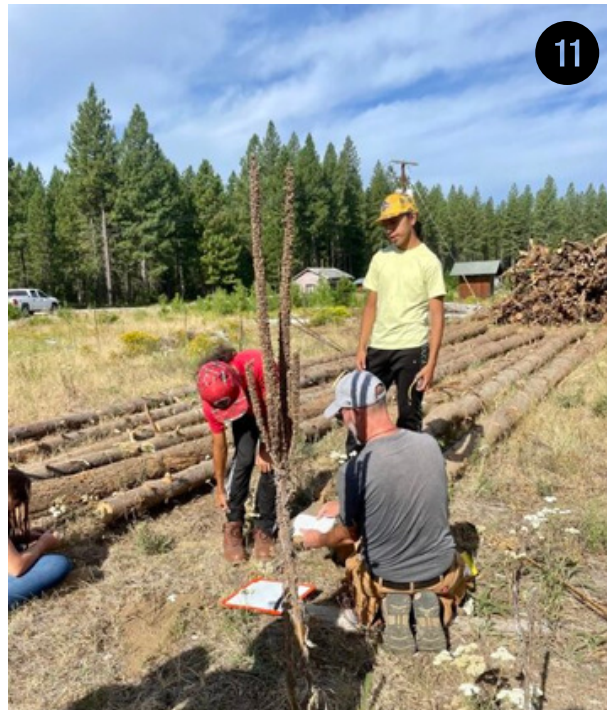


As of mid-2023, PEI offers four CTE frameworks: Introduction to Forest Management, Advanced Forest Management, Introduction to Restoration Ecology and Advanced Restoration Ecology. Renewable Energy is in the draft stage, Introduction Education through Outdoor Learning, Advanced Education through Outdoor Learning frameworks are currently being developed and four more frameworks: Introduction to Aquaculture and Fisheries, Advanced Aquaculture and Fisheries, Introduction to Urban and Community Forestry and Advanced Urban and Community Forestry are scheduled to be developed in 2024.





The courses are designed to work both as stand-alone courses and as part of a network that helps students navigate their high school graduation credits and plan for career choices. “While the pathway to a given job contains specific content, and there are transferable skills that cross all natural resource and conservation jobs,” says Spalding. “A student may start out wanting to explore restoration ecology and then realize they’re more interested in becoming a teacher. We want to build a whole suite of courses that will help students figure out what they want to do and understand what their next step is that will take them toward their goals.”



## Youth Engaged in Sustainable Systems (YESS)

In 2020, PEI piloted the YESS program in collaboration with the Highline School District and Mountain to Sound Greenway Trust. The six-week internship gave students who needed credits toward graduation an opportunity to earn Career and Technical Education (CTE) credits while also earning a stipend for environmental conservation work.

PEI facilitated and took the lead on the development of teaching materials based on the principles of Universal Design for Learning, including culturally responsive practices and embedded social and emotional learning strategies. The program was developed to reengage students in marginalized populations including students of color, those experiencing poverty and/or homelessness, those in foster care and those with disabilities.



In 2020 the program launched with just one crew; by 2021 it had expanded to four statewide and in 2023 six high school crews from Glenwood, Riverview, Sno Isle Tech Skills Center, Tumwater, and Yakima (2) school districts completed the 180-hour course. "I learned how to do professional introductions, many things they do to restore riparian sites, and how to better communicate [with] others," said one participant. "I learned many things about fish species and plants, the environment, and how to protect the ecosystems and restore them. I enjoyed going out and doing field work and connecting with my peers and people in the natural resources field."

## FieldSTEM in Action – Success Stories

The FieldSTEM model is a powerful tool for bringing STEM learning to life, but it remains a theory unless teachers use it. Here are three teachers who have done just that in classrooms around Washington State.



### Kitsap School District – West Puget Sound

Roxann Stewart teaches 5th grade at Brownsville Elementary School in the Kitsap School District. In 2021 her class created 'Toad Abodes,' potential homes for amphibians that incorporate knowledge about habitat and ecosystems. "They love going outside and the first time we did Toad Abode, they were instantly engaged," she says. "They're figuring out how to make the rain cascade off the top and using all these terms from Bear Grylls and other nature shows they've seen. They know what those mean and how to use the resources they have." That year, her class had the highest science scores in the district, a fact she attributes to a combination of applying PEI training and the outdoor learning the students experience at Camp Coleman.





"I was really proud of my kids," says Stewart. "It's a result of all the outdoor education. There's so much material on ecosystems and it's so easy to visit the marina here at school and find all the different components within the ecosystems."



## Mattawa School District – Eastern Washington

In 2022, Ashley Dykes was teaching 4th grade in Mattawa School District, where 98% of her students were from migrant families and 94.1% are low-income. Although its population is small, Mattawa is the third most densely populated city in Washington State, with families stacked on top of each other amid a sea of orchards and farms.

That year Dykes took a creative and simple approach to getting her students outdoors by designing a PEI math performance task that required only a walk through the surrounding neighborhood. Performance tasks are mini-research units that align STEM and English Language Arts (ELA) or math with Next Generation Science and Common Core standards. "Our neighborhoods in Mattawa are so unique, but to our students, they're the norm," says Dykes. "I wanted to get a sense of how they felt about where they lived."

In fourth grade, students are learning multi-digit addition and subtraction as well as rounding up numbers. The neighborhood walk lent itself perfectly to those skills as well as observation, science and data analysis. "I asked them simple questions," Dykes explains. "There were different types of homes like trailers and mobile homes mixed in with stick-built houses, duplexes and apartments. They estimated how many adults might live in each one. There was a lot of language development and science as well as math."



When they returned to the classroom, Dykes provided the students with charts and housing costs which they compared to the numbers they had produced on their walk. Two questions many of them had: why weren't there any homes for sale in their neighborhoods? And how could people like their families afford homes on the income that they made? "It started conversations that were rich," says Dykes. "They were engaged in the session. The addition was important, but the big issue was, how can we have this problem in our community where there aren't even any homes for sale?" Her students continued to refer to the lesson throughout the year."



## Ellensburg School District – Central Washington

Visitors to Ann Riley's third-grade classroom at Lincoln Elementary School in Ellensburg this spring would have discovered a group of eight and nine-year-old students enthralled by an unusual engineering challenge: designing structures to help pill bugs – aka 'roly-polies' – pass safely from one side of Interstate 90 to the other.

"They were so engaged, and they took it very seriously," says Principal Joanne Duncan. "In their final presentations, they got to talk about their designs and what worked as well as what didn't. They were so proud of what they had accomplished."

The assignment was not theoretical, but part of a pilot program for Lincoln Elementary teachers to integrate lessons on the I-90 Wildlife Crossing project with STEM and English Language Arts. The Wildlife Crossing bridges a fifteen-mile section of interstate and connects the Cascade Mountains to the north and south, creating safe passage for a wide variety of species from elk and black bears to salamanders and yes, roly-polies. Since the first seven-mile stretch was completed in 2019, over 4,000 animals have used the crossing.





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As part of their planning process, Lincoln Elementary staff attended a PEI workshop that used Project WILD activities as an introduction to ways the Wildlife Corridor project could be adapted for use in K-5 classrooms. PEI's Central Washington FieldSTEM Coordinator Megan Rivard helped participating educators connect with key personnel involved in the overpass project.

For part of the PEI workshop, Rivard met participating teachers at the pond where they were able to learn about the massive restoration project firsthand from U.S. Forest Service wildlife biologist Patricia Garvey-Darda and Washington State Department of Transportation (WSDOT) Assistant Region Administrator for Development, Brian White. They also learned about other partners such as the Sierra Club, The Nature Conservancy, Mountains to Sound Greenway Trust, American Rivers, The Summit at Snoqualmie and more.



Principal Duncan attended the workshop and came away impressed. "Listening to Patty Darda speak about what it took to have this project be successful, it was listening to and being respectful of different perspectives," she says. "These partners were able to come together around a common vision. If we can't start that in our elementary schools and get kids working to solve the complex problems we are facing as a society, I don't know what the point of schooling would be. It's critical for our future."

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# THE FUTURE OF PEI

## Increased Dual Language Programming in K-12 Schools



In the 2021-22 school year, 110 schools in Washington State enrolled 35,450 students in dual-language programs. It's a start, but OSPI has a much more ambitious goal: that every student in the state can access a dual-language program and the opportunity to become proficient in two or more languages by 2030. PEI has a role to play in making this goal a reality.

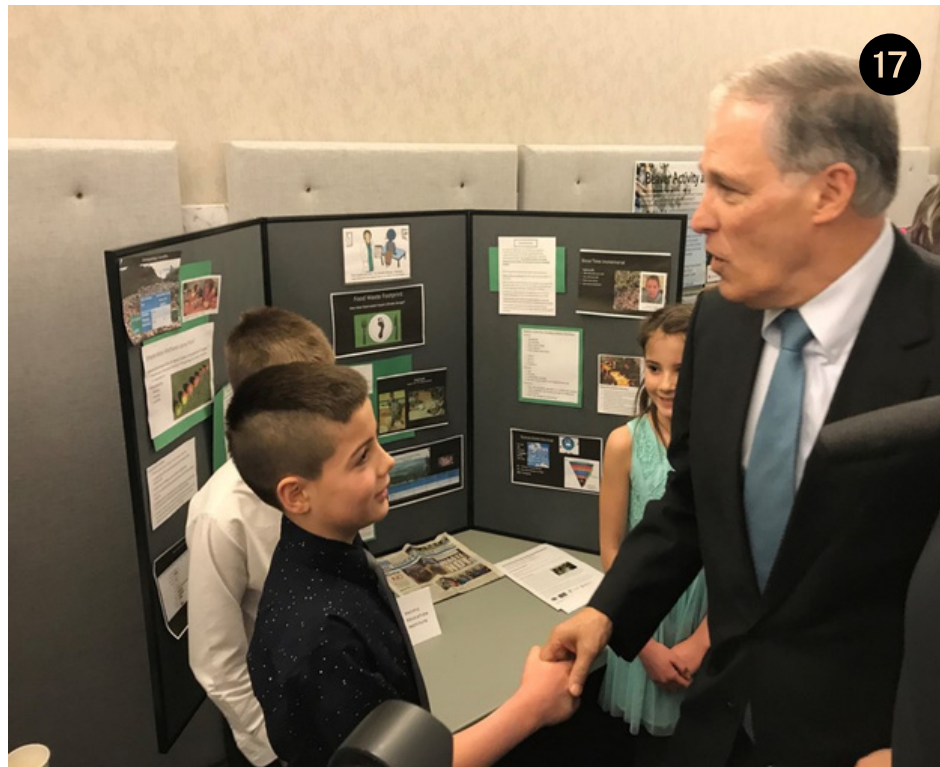
Our Dual Language program works to close opportunity and achievement gaps for Hispanic and Latinx students by providing training and resources for dual language and STEM teachers statewide. Dual-language workshops allow teachers to participate in Spanish, which increases their comfort levels. We provide numerous STEM teaching materials that are not only in Spanish but are also aligned to Next Generation Science Standards and intentionally written to have consistent terminology across grade levels and subject areas. A team of educators collaborated on the translations to ensure that no matter what Spanish-speaking region a teacher or student came from, the terms would be understandable.

We have already seen the benefits of this approach; having teaching materials already available in Spanish means educators have consistent Spanish terminology for scientific terms across grade bands and can spend more time on teaching and less on searching and translating.





But again, this is only a start. As of 2023, our Dual Language program consists of just one person who is covering the entire state. As statewide efforts to expand dual language programming advance, our team will need to grow along with them. Collaboration with existing and new dual language partners – community groups, educators, and organizations that connect Hispanic and Latinx families with the outdoors – will also be key.



## Preparing Young People to be Solution-Makers

How can students tell if a climate news story is real? Do they know how the climate is changing and impacting their communities? As climate continues to change and weather patterns are dramatically altered, these questions have become increasingly important. However, a 2022 survey from the North American Association of Environmental Educators found that a lack of confidence in their ability to teach climate change was the number one barrier to providing instruction on the topic.

Looking ahead, PEI will continue to support educators with training, tools and resources to engage students in this critical issue. During the past year, 325 educators have attended at least one of our Climate Science: Solutions Oriented Learning Storylines workshops, impacting an estimated 28,063 students.



In 2022, we piloted a Sustainability Course with a cohort of teachers around Washington State. The ten-unit course was developed by PEI staff members and is focused on refining students' critical and creative thinking around the complexities of climate change, sustainability, and United Nations Sustainability Development Goals (SDGs).

The Sustainability Course is a powerful tool for teachers to engage their students in understanding the causes and impacts of climate change, exploring potential solutions within their communities and developing action plans. Not only do students gain a greater knowledge of STEM subjects, but they also learn how to apply what they're learning to be part of real-world solutions to climate change.

Lincoln Elementary School Principal Joanne Duncan, whose school is implementing FieldSTEM across grade levels, puts it best. "If we can't start in our elementary schools and get kids working to solve the complex problems we are facing as a society," says Duncan, "I don't know what the point of schooling would be. It's critical for our future."




## Expanding Access & Impact

Ellen Ebert has been consistently impressed by PEI's foresight. Ebert is the Director of Secondary Education Content and has been involved with PEI since former Executive Director Margaret Tudor sat down at her table during a conference over a decade ago.

"PEI has been able to foresee where the needs are and to grow into that space," she says. "They've kept their eye on the mission and vision but also been able to forecast and step into areas like adding career connections and looking at how Career and Technical Education can dovetail with equivalency work and frameworks. It's been an evolving landscape in a very productive way."







That foresight will be useful as our team moves toward one of the goals outlined in our strategic plan: designing, developing and delivering high-quality PreK-12 professional learning and educational materials to implement FieldSTEM statewide. While we have expanded our team more than ever in the past 18 months, much work remains to ensure that all schools and districts have access to PEI's professional learning opportunities and materials.

Ebert is confident that PEI will get there by continuing to work not only with educators but also with the communities that surround them. "PEI has a unique way of recognizing the signpost that's in the distance," she notes. "It's not quite in focus yet, but there is a direction to it. When you arrive, there are multiple switches in the road, which means you must navigate that space. You must put yourself in the space to be a learner, bringing innovation and imagination to the work that you're doing. I know PEI will be constantly progressing."

## Photo Captions

Figure 1. Some of PEI's original staff, including Dr. Margaret Tudor, second from right.

Figure 2. PEI's original logo.

Figure 3. Some of PEI's original staff, including Lynn Ferguson and Pat Otto.

Figure 4. An early field experience.

Figure 5. An early field experience.

Figure 6. An early field experience.

Figure 7. An early field experience with PEI's Executive Director Kathryn Kurtz.

Figure 8. Dual language interpretive walk at Woodard Bay. Photo courtesy of WA DNR.

Figure 9. Riverview High School YESS program learn about invasive blackberry removal.

Figure 10. Tumwater High School YESS program participants learn about tree coring.

Figure 11. Glenwood High School YESS program on DNR land.

Figure 12. South Whidbey Elementary school students.

Figure 13. Brownsville Elementary School students at the Port of Brownsville.

Figure 14. Mattawa School District teacher Ashley Dykes and her students.

Figure 15. Students and parent from Lincoln Elementary in Ellensburg School District visit a nature bridge over I-5.

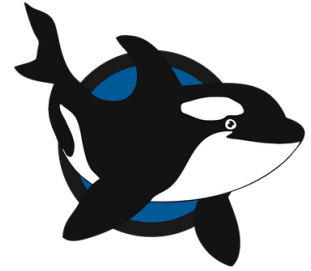
Figure 16. PEI's Daniel Cuevas and Lourdes Flores Skydancer.

Figure 17. Governor Jay Inslee shakes hands with a STUDENT SUMMIT presenter.

Figure 18. PEI's Megan Rivard presents FieldSTEM School District of the Year Award to Cascade School District of Central Washington.



# 2023 FIELDSTEM HONOREES



## **Jordan Duncan - Orin Smith Elementary, Chehalis**

### **Teacher of the Year**

When I think back to the most memorable times of elementary school, I remember the “solar oven” we built to make smores in third grade, the smokehouse we were able to crawl through in fourth grade, and of course - the field trips! With COVID the past few years, and budgets getting tighter, our focus this year was to bring field trips, or field experiences, to the school. In working with Sierra Pacific, Pacific Education Institute, WA Department of Natural Resources, the Lewis County Conservation District, and WA State Parks, we were able to bring experiences to the students in many cases or found funding for transportation and ranger programs from local community-oriented organizations. Our pilot of the phenomena, “Why is Washington State having more wildfires?” really lit a spark for our students to learn about forest management and our changing climate.

## **Cascade SD - Leavenworth District of the Year**

Cascade School District (CSD) is a rural school district in the Leavenworth region of Central Washington with about 1200 students. One of the core values of CSD is the Outdoors: we actively engage in the beauty and diversity of our natural environment to learn, stay fit, and positively impact the world around us. CSD has been delighted to partner with Pacific Education Institute and other community partners to consider how to put this value into practice.



## **Mountain to Sound Greenway Trust Collaborator of the Year**

Becca Kedenburg (she/her) is the Education Program Manager at the Mountains to Sound Greenway Trust. The Greenway Trust hosts two Youth Engaged in Sustainable Systems (YESS) student internship programs, with Highline Public Schools (starting in 2021) and Riverview School Districts (starting in 2022). YESS helps increase access for teens to careers in natural resources and conservation related fields.

## **South Whidbey Elementary - North Campus School of the Year**

South Whidbey Elementary School (SWES) is a “Farm, Forest and Sea” focused school - integrating our Field STEM learning with the local farms, forests and the Salish Sea surrounding South Whidbey. Principal Susie Richards brings a 30-year background as a formal and informal environmental educator with a passion for outdoor inquiry-based education for all students. SWES is fortunate to have had the amazing support of Molly Griffiths from PEI, as well as outstanding educators who have led this work - including Caris Tucker, Andrea Mitchell, Lori O’Brien, Andi Kopit and Terry Welch.



# 2023 FIELDSTEM HONOREES



**Nancy Skerritt**

## **FieldSTEM Champion**

Nancy Skerritt has devoted fifty-plus years to her career in education. She worked as a middle school and high school counselor, secondary language arts teacher, curriculum director, staff developer, author, and assistant superintendent for teaching and learning. She has taught numerous workshops locally and nationally in integrated curriculum, thinking skills, ELA standards, performance assessments, and Habits of Mind. Her work with sustainability education began in partnership with the Washington Forest Protection Association in the mid-nineties and then with PEI. She helped to author many curriculum units and performance assessments that taught students about environmental issues, actions they can take to remedy problems, and the importance of sustainability. These units were built on the commitment to outdoor learning experiences and meaningful field investigations. Nancy is thankful for the many people she has worked with over the course of her career: teachers, students, para-educators, administrators, and others.



**Rep. Shelly Short -  
District 7**

## **Legislator of the Year**

Sen. Shelly Short, R-Addy, represents the 7th Legislative District in the state Senate, covering all or part of seven counties in north-central and northeast Washington. Elected to the state House in 2008, Shelly moved to the Senate in 2017. Natural resources, energy and agriculture are top issues for Sen. Short and the people of her sprawling rural district, the largest in the state. She is a member of the Senate Committee on Agriculture, Water, Natural Resources and Parks, as well as the Senate's Environment, Energy and Technology Committee. Shelly sees FieldSTEM programs as a way to extend hands-on outdoor learning opportunities in applied sciences to students in all corners of the state.



**Rep. Kristine Reeves -  
District 30**

## **Legislator of the Year**

Rep. Kristine Reeves (D-Federal Way) is a working mom, former foster youth, and small business owner who advocates for working families, educators and veterans, and building an economy that works best for all of us. Outside of the Legislature, Reeves is a community & economic development, equity & inclusion, and organizational development consultant.

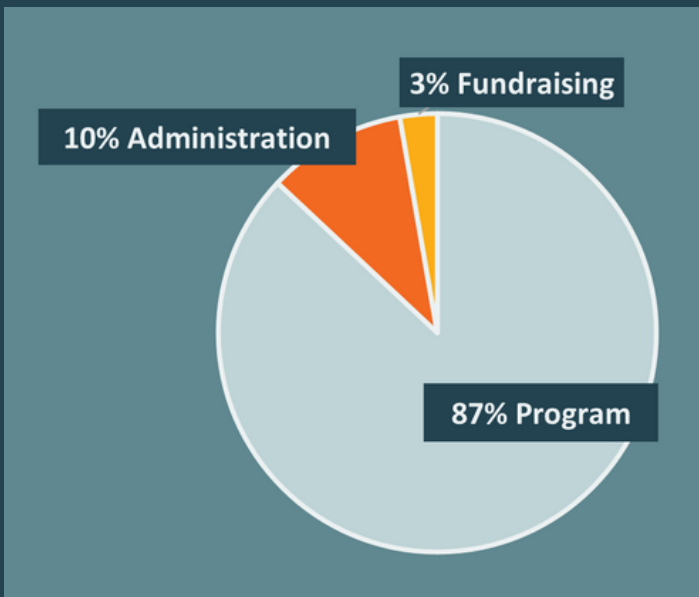
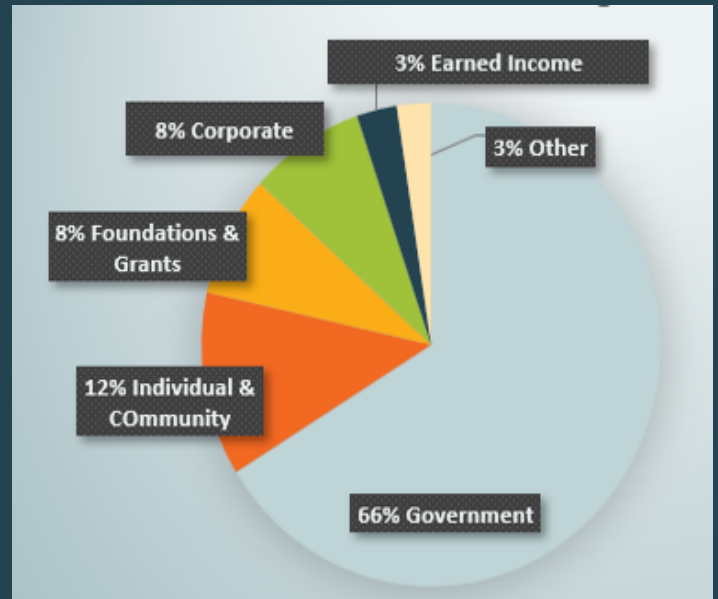
**These individuals and organizations exemplify our vision of promoting civic and scientific literacy by empowering people to make balanced, well-informed decisions for just and sustainable communities. It takes all of us to offer the support educators need to effectively implement FieldSTEM.**



# OUR FINANCES

## REVENUE

Government Grants	1,368,056
Individual & Community Giving	6,716
Foundations & Nonprofit Giving	206,252
Corporate Giving	181,963
Earned Income	301,464
Other	8,366
<b>Total Revenue</b>	<b>2,078,817</b>



## EXPENSES

Programs	1,660,271
Administration	195,934
Fundraising	52,569
<b>Total Expenses</b>	<b>1,908,774</b>



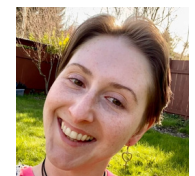
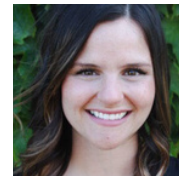
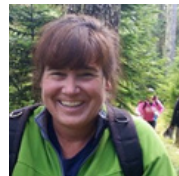
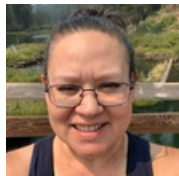
# OUR PEOPLE

## Board of Directors

Ron Schultz	<i>State Conservation Commission</i>
Marissa Rathbone	<i>WA State School Directors Assoc.</i>
Lisa Perry	<i>Sierra Pacific Industries</i>
Leslie Druffel	<i>The McGregor Company</i>
Erin Ewald	<i>Taylor Shellfish Farms</i>
Cinnamon Bear	<i>Manulife</i>
Justin Parker	<i>NW Indian Fisheries Commission</i>
Jason Callahan	<i>Green Diamond Resource Co.</i>
Kim Fry	<i>WA Assoc. of School Admins.</i>
Lindsey Williams	<i>Walla Walla Community College</i>
Cindy Mitchell	<i>WA Forest Protection Assoc.</i>
Doug Kennedy	<i>WA Dept. Natural Resources</i>
Ignacio Marquez	<i>WA Dept. Agriculture</i>
Bill Monahan	<i>Rayonier</i>
Claudine Reynolds	<i>Port Blakely</i>
Hanford McCloud	<i>Nisqually Tribe</i>
Scott Seaman	<i>Assoc. of WA State Principals</i>
Steve Robinson	<i>Steve Robinson Productions</i>

## Staff

Kathryn Kurtz	<i>Executive Director</i>
Gail Kramer	<i>Finance &amp; HR Director</i>
Denise Buck	<i>Program Director</i>
Katie Hatam	<i>Assoc. Dir. of Program</i>
Heidi Smith	<i>AD of Comm. &amp; Devt.</i>
Tressa Arbow	<i>East Sound-N F/S Coor.</i>
Molly Griffiths	<i>West Sound F/S Coor.</i>
Megan Rivard	<i>Central WA F/S Coor.</i>
Heather Spalding	<i>Green Jobs Coordinator</i>
Lourdes Flores	<i>Multicultural Coordinator</i>
Michelle Townshend	<i>Project Specialist</i>
Chelsea Trout	<i>Green Jobs Coordinator</i>
Rachel Drummond	<i>Program Coordinator</i>
Lisa Best	<i>Operations Coordinator</i>
Eli Church	<i>Operations Coordinator</i>
Lara Tukarski	<i>South Sound F/S Coor.</i>
Julie Tennis	<i>Coastal F/S Coor.</i>
John Hunter	<i>Coastal F/S Coor.</i>
Amy Keiper	<i>Northwest F/S Coor.</i>
Amy Dawley	<i>Eastern WA F/S Coor.</i>
Daniel Cuevas	<i>East Sound-S F/S Coor.</i>
Emily Newman	<i>Lower Columbia Coor.</i>





# OUR FUNDERS

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## 100,000+

Employment Security Department · Office of the Superintendent of Public Instruction

## 20,000-99,999

Dawkins Charitable Trust · Hampton Lumber · Manulife (Hancock Natural Resource Group) · Mountains to Sound Greenway Trust · Sustainable Forestry Initiative Inc. (SFI) · The Russell Family Foundation

## 10,000-19,999

Grays Harbor Community College · Icicle Fund · KeyBank

## 5,000-9,999

Community Foundation of South Puget Sound · Gottfried and Mary Fuchs Foundation · Grays Harbor Marine Resource Committee · Green Diamond Resource Company · Port Blakely · Rayonier · Sierra Pacific Industries · The Norcliffe Foundation · Washington Friends of Farms & Forests · Washington State SFI Committee (SIC)

## 1,000-4,999

Bloedel Timberlands Developement · Florence B. Kilworth Foundation · Forest Investment Associates · Fruit Growers Supply Company · Manulife Investment Management · Nisqually Indian Tribe · Our Community Credit Union · Squaxin Island Tribe · Stimson Lumber Co. · Suquamish Tribe · Taylor Shellfish · The McGregor Company · The Rayonier Advanced Materials Foundation · WestRock

## 1-999

Adina Groza · Adrian Miller · Amazon Smile · Ann & Zane Smith · Beth Doglio · Bill Monahan · Blade Smithee · Brian & Deborah Bahs · Cari Schwisow · Charlotte Nunes · Christianne Richard · Cindy Mitchell · Dean Rae · Dennis Sterner · Doug Kennedy · Eve Preus · Evrnu · Fred Meyer Rewards · Gareth Waugh · Greg Barker · Greg Smith · Hattie Osborne · Heidi Smith · Hispanic Access Foundation · Jeevan Anandasakaran · Jessica Josephs · John Ison · Joleen Deterding · Julie Fry · Julie Luthy · Karen Rae · Kathryn Kurtz · Katie Hatam · Katie Kosanke · Kevin & Denise Buck · Kim Fry · Koana Smith · Kyle Guzlas · Kylie Phillips · Laura Barnoski · Leigh Ann Gilmer · Leslie Druffel · Marcie Cleaver · Margot Losa · Martin Fortin · Megan Anderson · Meredith von Trapp · Merrill & Ring · Michael Nelson · Mindie Reule · Mira Lutz Castle · Molly Griffiths · Pam Farr, Ph.D. · Patricia O'Brien · Patricia Otto · Paul & Gail Kramer · Peter Heide · Puget Sound Energy, Inc. · Raven Skydancer · Roz Thompson · SCJ Alliance · Shelley Barker · Steve & Kathryn Hamilton Wang · Susan Kurtz · Susan Smith · Susan Young · Tamara Holmlund, Ph.D. · Valeska Rae · William Taylor

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# AN INVITATION

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## SUPPORT

If you believe, like we do, that outdoor science education is critical for all students and the future, please consider donating to PEI. When you give to PEI, you directly support educators in building scientifically literate communities.

Consider:

- Making an individual donation
- A recurring donation
- Sponsorship

To learn more, contact [devo@pacificeducationinstitute.org](mailto:devo@pacificeducationinstitute.org).

## COLLABORATE

Community collaborators are essential to PEI programs. To partner with us on a new initiative or to provide Washington students with integrated, locally relevant, career connected learning, contact [info@pacificeducationinstitute.org](mailto:info@pacificeducationinstitute.org).

## LEARN

Looking for professional learning opportunities? Please visit our event calendar: [pacificeducationinstitute.org](https://pacificeducationinstitute.org)

