



Integrate Learning Standards/ FieldSTEM

1. **Purpose:**

In K–12 education, an integrated approach to learning across multiple state educational standards, including English language arts, mathematics, and science, is offered by the Pacific Education Institute’s FieldSTEM® program. This program provides real-world and career-connected outdoor field studies, along with project-based and work-based learning opportunities aligned with environmental, natural resource, and agricultural sectors of the economy.

2. **Description of services provided:**

The FieldSTEM contractor provides professional learning opportunities for teachers and administrators through workshops offered locally and statewide using online meeting platforms and in-person trainings. Regional FieldSTEM coordinators provide tailored support for school and district planning and implementation teams. Regional coordinators regularly meet with administrators from schools and districts to refine goals, meet with educators to support implementation, and support schools and districts in finding community partners to provide field experiences that connect to the local economy and career opportunities. PEI provides support to community partners on how to work effectively with school districts for mutually beneficial partnerships.

Staff continued to build, develop, pilot, and implement content-integrated frameworks and performance assessment tasks that support student learning through an environmental and sustainability lens, consistent with the intent of the proviso and WAC 392-110-415.

3. **Criteria for receiving services and/or grants:**

Public schools and districts, tribal schools, and private schools can obtain these services. Most participants are from public schools or districts. PEI uses the School Improvement Framework data to corroborate that they are primarily serving schools and districts that have historically been underserved by science education.

Beneficiaries in 2021-22 School Year:

Number of School Districts: 106
 Number of Schools: 289
 Number of Students: 43,352
 Number of Educators: 911
 Other: 74 - Administrators

Number of OSPI staff associated with this funding (FTEs): .32

Number of contractors/other staff associated with this funding: 0

FY22 Funding: State Appropriation: \$750,000
 Federal Appropriation: \$0
 Other Fund Sources: \$0
 TOTAL (FY22) \$750,000

4. Are federal or other funds contingent on state funding?

No

5. State funding history:

Fiscal Year	Amount Funded	Actual Expenditures
2022	\$750,000	\$750,000
2021	\$500,000	\$492,918
2020	\$500,000	\$500,000
2019	\$500,000	\$500,000
2018	\$500,000	\$500,000

6. Number of beneficiaries (e.g., school districts, schools, students, educators, other) history:

Fiscal Year	Number of School Districts	Number of Schools	Number of Students	Number of Educators	Number of Administrators
FY22	106	289	43,352	911	74
FY21	81	228	31,367	900	50
FY20	74	N/A	29,023	651	47
FY19	64	N/A	14,336	512	N/A
FY18	52	N/A	13,628	290	N/A

7. Programmatic changes since inception (if any):

PEI developed a FieldSTEM District Implementation Continuum, which is designed to assess the degree to which a school or district is currently implementing the various components of FieldSTEM to support their implementation. As school districts engage their students in integrated, locally relevant, career connected learning and progress along the FieldSTEM District Implementation Continuum from 'Exploring' to 'Emerging' district, to an "Excelling' district. District administrators complete the continuum. The Continuum was implemented with six school districts in June 2022.

PEI is committed to ensuring all staff and board members are aware of and enacting justice, equity, inclusion, and support of diversity in education. In the 2022 school year, all staff and some board members attended four days of "Equity Institute" training. PEI also has a committee that meets bi-monthly to encourage growth and the individual and organizational level to improve practices related to Justice, Equity, Inclusion, and support of diversity in its programs. PEI has hired a statewide multicultural program coordinator. Tasks implemented with this funding include translating some materials into Spanish, offering workshops in Spanish for Spanish speaking educators, and hosting community meetings for families and others.

PEI has leveraged Career Connect Washington funding to increase work related to green jobs and equitable access to career pathways.

8. Evaluations of program/major findings:

Implementation data showed that workshop participants:

- Took students outside (75%), used outdoor observations (65%),
- Led a Field of Schoolyard Investigation with their class (53%),
- Participated in one or more steps in the FieldDesign process (40%),
- Integrated multiple subjects (34%),
- Connected with a new community partner (26%),
- Encouraged at-home outdoor learning (20%),
- Implemented a performance task (14%)

Evaluations showed that PEI maintained the high quality of all workshops and participants appreciated the opportunity to learn from PEI about how to better support students, teachers, and administrators in building a scientifically literate citizenry prepared and inspired to make balanced decisions for sustainable communities. Participants experienced important shifts in their thinking about how to best support this work and offered productive suggestions for improvements or additional opportunities.

Additionally, participants:

- Felt the workshops exposed them to relevant examples and prepared them to take their students outside to do investigations that are culturally relevant and inclusive of all students.
- Described takeaways contributing to satisfaction, including opportunities to network or collaborate with others, access to useful classroom resources, workshop format, and subject integration.
- Described how these workshops might support them to integrate the subjects, as well as the difficulties of doing so. Several said they saw examples of what integration and addressing standards might look like in the FieldSTEM work but that these were not necessarily covered explicitly in these introductory workshops.
- Said workshops inspired them to get started and their excitement to do so.
- Said they learned about relevant examples (96%) and felt prepared to take their students outside (96%).
- Developed awareness of how research supports outdoor learning, understanding of how FieldSTEM addresses science standards, and confidence to develop and implement FieldSTEM with their students.
- Felt more prepared to support students to do an investigation outdoors to at least some extent.
- Felt more confident about the integration of ELA with science for both student engagement and to meet WA State ELA standards.
- Reported feeling more confident to implement instructional practices to make learning experiences more locally relevant (93%).
- Felt more prepared to make learning experiences more inclusive for diverse groups of students (85%), as well as to address career connected learning, implement standards-based instruction, and address sustainability of the community.
- Participated in virtual workshops to a greater extent than in-person workshops, which expanded PEI's geographic reach.

One teacher said, "I used to think that outdoor field-based learning was only for science teachers, but now I think it can be used as an integration for all content areas." Another stated, "I used to think that quieter classrooms were more productive, but now I think that learning happens through talking."

9. Major challenges faced by the program:

The most common barriers to implementation identified by teachers were time to plan and deliver units of study/curriculum constraints, COVID restrictions, transportation, and weather. Additional educator concerns were funding, insufficient support-staff numbers, capacity overload, and lack of school district administrative support.

10. Future opportunities:

Content integration is an area of interest and enthusiasm for educators, who also see it as a challenge. Continuing the development of content-integration models and supports provides room for growth and opportunities for place-based learning that meets the needs of learners.

Community Partner Support was found to provide schools and students access to natural spaces, subject area experts, appropriate gear, and other resources. Supporting partnership development between schools, districts, and community groups is an important role PEI plays in the outdoor learning space.

Identifying necessary supports for teachers that enable them to fully implement FieldSTEM, and planning to provide them to every educator engaged in the program, will be a focus in the coming year.

11. Statutory and/or budget language:

ESSB 5693, Sec. 522(11)(e) - \$750,000 of the general fund—state appropriation for fiscal year 2022 and \$750,000 of the general fund—state appropriation for fiscal year 2023 are provided solely for the office of the superintendent of public instruction to contract with a qualified 501(c)(3) nonprofit community-based organization physically located in Washington state that has at least 18 years of experience collaborating with the office and school districts statewide to integrate the state learning standards in English language arts, mathematics, and science with FieldSTEM outdoor field studies and project-based and work-based learning opportunities aligned with the environmental, natural resource, and agricultural sectors. The office may require the recipient of these funds to report the impacts of the recipient's efforts in alignment with the measures of the Washington school improvement framework.

12. Other relevant information:

The organization is beginning partnership with a school district on their Mastery Based Learning program for middle school science and math integration.

Two staff are participating in the OSPI Elementary Science Cadre for STEM integration to improve understanding, implementation, and integration of the NGSS to fidelity.

13. Schools/districts receiving assistance:

See [OSPI's grantee list](#).

14. Program Contact Information:

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