

Science Teacher Training Grants

Statutory and/or Budget Language

\$3,000,000 of the general fund—state appropriation for fiscal year 2024 and \$3,000,000 of the general fund—state appropriation for fiscal year 2025 are provided solely for the office of the superintendent of public instruction to provide grants to school districts and educational service districts for science teacher training in the next generation science standards including training in the climate science standards. At a minimum, school districts shall ensure that teachers in one grade level in each elementary, middle, and high school participate in this science training. Of the amount appropriated \$1,000,000 is provided solely for community-based nonprofits including tribal education organizations to partner with 10 public schools for next generation science standards.

Purpose

To develop a network and provide grants to educational service districts (ESDs), community-based organizations (CBOs), tribal-serving schools, and school districts for science teacher training in the Washington State Science Learning Standards (WSSLS) and climate science education.

Description of Services Provided

OSPI ensures the provision of equity-focused, climate integrated, professional learning for science educators across Washington state with priority service to students historically underserved by science education. This involves many forms of professional learning, the creation of lessons and teaching materials that are shared as Open Educational Resources (OERs) on the Washington Commons OER website, and the development of a strong, state-wide network.

Funded ESDs and CBOs collaborated to develop and deliver WSSLS professional learning including climate science professional learning and courses for educators in Washington schools and districts, particularly those historically underserved by science education. During the 2020 legislative session, the proviso was amended to include Tribal Education Agencies as part of the community-based organizations section which allowed direct funding of tribal serving schools to develop indigenous programs for science and climate education. The entire project was contractually supported by the Science and Math Institute at the University of Washington who collaborated with OSPI staff to meet the needs of the grantees.

Criteria for Receiving Services and/or Grants

Priority was given to funding projects that support populations of students, schools, districts, and communities historically underserved by science education including but not limited to:



Tribal Compact Schools, migrant students, schools with high free and reduced lunch populations, rural and remote schools, students in alternative learning environments, students of color, multi-lingual learner students, and students receiving special education services. Beneficiaries reflect duplicated counts; representatives from districts may take part in multiple funded opportunities.

Beneficiaries in the 2023-24 School Year

Number of School Districts	716
Number of Schools	1,600
Number of Students	193,917
Number of Educators	3,284
Other	419

Are Federal or Other Funds Contingent on State Funding?

No

State Funding History

Fiscal Year	Amount Funded	Actual Expenditures
2024	\$3,000,000	\$2,872,806
2023	\$5,000,000	\$4,830,406
2022	\$3,000,000	\$2,734,112
2021	\$3,000,000	\$2,922,403
2020	\$3,000,000	\$2,957,305

Number of Beneficiaries Per Fiscal Year (e.g. School Districts, Schools, Students, Educators, Other)

Fiscal Year	Number of School Districts	Number of Schools	Number of Students	Number of Educators
2024	716	1,600	193,917	3,284
2023	941	1,944	317,000	8,139
2022	852	2,847	177,300	4,361
2021	>200	2,021	284,500	7,476
2020	>200	1,742	244,900	6,830

Programmatic Changes Since Inception (If Any)

FY 2021: The proviso was amended to include Tribal Education Agencies as part of the community-based organizations section of the proviso language. The grant program has included three tribal-serving schools since this change.

FY 2023: Increased funding from \$3 million to \$5 million enabled grantees to have the ability to adequately staff programs and offer more diverse and accessible professional learning opportunities to educators.

FY 2024: Decreased funding from \$5 million to \$3 million coupled with inflation reduced the number of projects able to provide professional learning to Washington educators.

Program Evaluation or Evaluation of Major Findings

Grantees in the ClimeTime network demonstrated a commitment to high quality professional learning in science and climate science especially in support of students historically underserved by science education. Grantees created over 100 learning events for educators across Washington, ranging from elementary science integration, supporting the experiential learning of adjudicated youth, regional workshops for nonformal science educators, and youth co-creating guidance for educators on climate science learning. Projects leaned into place-based learning, allowing educators and students to connect to their local ecosystems, learning about sage grouse, ocean acidification, and wildfires. Integration with other content areas has grown, grantees had multiple projects using computer science, art, writing, civics, and math all in support of science learning. ClimeTime continues to support educator implementation of high-quality instructional materials, training elementary teachers in curriculum field tests and engaging in-depth virtual professional learning communities for secondary teachers. Expensive curricular materials and access to science-specific professional learning continue to create a gap for science and climate education that the ClimeTime network seeks to fill.

Projects showed special attention to partnership, not only collaborating across ESDs and CBOs but with 13 tribal schools or governments, 25 non-grantee community-based organizations, 13 state and local governments, and 7 higher education departments. This list includes food banks, six state agencies such as the Department of Commerce and the Department of Natural Resources and regional agencies like conservation districts and cities. These partnerships exemplify the community approach of this work and the leadership that the ClimeTime network provides to organizations and districts across the state.

The network welcomed a new grantee, Front and Centered. This CBO is a coalition of groups who represent communities of color, people with lower incomes, and Indigenous peoples who are on the frontlines of climate and environmental change. The inclusion of Front and Centered continues to push the ClimeTime network to serve students historically furthest from science and climate education. Funding of three Tribal-serving schools including additional support for the inaugural Tribal Youth Leadership Gathering: Fisheries and Hatcheries brought culturally relevant science and climate learning to Native youth.

A quote from a teacher engaged in one project's professional learning demonstrates the shifts that ClimeTime seeks to create in science and climate learning across Washington state: "We

need to stop thinking *Is this student good enough for my science class?* and start asking *Is my science class good enough to engage all students?*".

Creativity and reflection allowed for the network to improve upon itself. The development of rich asynchronous courses continued as rural educators and those without funding for substitutes sought ways to engage without driving long distances or leaving the classroom. Social and emotional learning was attended to as adjudicated youth interacted with the outdoors and climate learning, and projects addressed the emotional aspects of climate anxiety by giving students voice and attending to action and a focus on climate solutions. Lessons and units were developed to support dual language programs and educators and students who speak Spanish. Integration with literacy, computer science, art, social justice, and the John McCoy Since Time Immemorial Curriculum was evident throughout projects across the state.

One of the robust outcomes of the ClimeTime network is a curated collection of Open Educational Resources on the [Washington OER Hub](#). These free and high-quality resources are utilized by teachers across the state. This year, the network engaged in an audit of resources which resulted in the revision of many units and lesson plans, as well as the creation of needed additions to the collection.

Major Challenges Faced by the Program

Two major challenges surfaced for the program in fiscal year 2024 that included competing needs for educator time and increasing costs across many sectors. All grantees reported retention and no-show issues that stemmed from educators either having no ability to acquire a substitute teacher or "burnout" or feeling overwhelmed at work. This has been a common post-pandemic occurrence; grantees have shifted to offering more after school and asynchronous opportunities to support teachers.

Rising prices across the state caused difficulties for grantees. Funding for staff, travel, and teacher stipends were affected as were day to day operations of all organizations. Venues increased prices, making it more difficult to find spaces for ClimeTime events and goods such as food and materials for science lessons were more costly. This meant spending more per event than in previous years.

Future Opportunities

As the climate crisis continues and with the identification of education as a climate solution from the United Nations Sustainable Development Goals, there is high demand and a necessity to increase science and climate education in Washington's K-12 schools. OSPI continues to grow and strengthen the ClimeTime network while receiving frequent requests for funding from districts, schools, and community-based organizations that cannot currently be fulfilled. There is an opportunity to fund more community-based organizations that serve diverse communities both in urban and rural locations as well as more tribal-serving schools. This is currently difficult with the decreased funding in fiscal year 2024.

The strength of the ClimeTime network supports the work of other OSPI programs and legislative initiatives, further increasing equitable science and meaningful learning opportunities for students. Four ClimeTime grantee organizations serve on the HB 2078 Outdoor Education advisory board along with three OSPI ClimeTime staff members. There is a vast opportunity to bring ClimeTime educational resources and expertise to further bolster the state's nascent outdoor learning programs. The review of learning standards and the charge of the legislature to integrate climate science into state learning standards is a lever that can be utilized by the program to further support all educators receiving professional learning in science and climate science as well as support the state's environmental and sustainability standards. The science learning standards review means a high need for educators to receive high quality professional learning on the revised standards, and this touch point could increase teacher engagement with climate science if thoughtfully planned.

ClimeTime projects continue to seek tactics to engage and support integration across subject areas. This work ensures science learning access to the state's youngest students and prepares older students for career pathways that require critical thinking across disciplines and join a workforce capable of solving the climate crisis. This integration can incorporate career and technical educators through professional learning, Career and Technical Education (CTE) equivalencies, and CTE specific resources. Building upon ClimeTime's success with elementary educators, further development of professional learning and materials on integration with English language arts (ELA) and math standards would support best practices of elementary education while addressing climate learning.

Other Relevant Information

ClimeTime represents the first funding of K–12 climate education by a state legislature in the nation. It is increasingly clear that other states want to learn from Washington while citizens of our state are pushing for more professional learning. The ClimeTime network was invited to write seven scholarly articles for a [special issue](#) of the National Science Teaching Association's publication, *Connected Science Learning*. The titles of the seven articles are below and represent the learning and reflection of this proviso over six years. If access is needed, please email the author of this report.

1. Washington's ClimeTime: Collaboration and Capacity-Building to Foster Climate Learning Across a State Network
2. Learning to Design Climate Education That Honors Indigenous Climate Leadership and Sovereignty
3. Grounded in Community: Leveraging Partnerships for K–12 Climate Education
4. Centering Climate Science in Learning
5. Action and Engagement in Climate Science Learning Pedagogy
6. Should Climate Science Be Local? YES!!
7. Make Climate Learning Happen Exactly Where You Are

Schools/Districts Receiving Assistance

[Click here to see a list of all OSPI grant recipients in the 2024 Fiscal Year.](#)

Program Contact Information

Name Johanna Brown, NBCT
Title Associate Director, Secondary Science
Phone 564-999-1504
Email johanna.brown@k12.wa.us