



Increasing Student Access to Hands-on Science Opportunities

2023–25 Biennial Operating Budget Decision Package

Recommendation Summary

Many students miss the opportunity to build a strong foundation in high-quality, hands-on science learning. The Legislature has made investments in these types of educational experiences, including the Pacific Education Institute’s FieldSTEM program, the Pacific Science Center, Salmon in Schools, and the Laser Interferometer Gravitational-Wave Observatory (LIGO) Exploration Center. The Office of Superintendent of Public Instruction (OSPI) requests an additional investment in several successful programs that expand access to hands-on science learning to students across the state.

Fiscal Details (Funding, FTEs, Revenue, Objects)

Operating Expenditures	FY 2024	FY 2025	FY 2026	FY 2027
Fund 001-1	\$10,422,000	\$5,544,000	\$6,906,000	\$7,472,000
Total Expenditures	\$10,422,000	\$5,544,000	\$6,906,000	\$7,472,000
Biennial Totals	\$15,966,000		\$14,378,000	
Staffing	FY 2024	FY 2025	FY 2026	FY 2027
FTEs	0.0	0.0	0.0	0.0
Average Annual	0.0		0.0	
Revenue	FY 2024	FY 2025	FY 2026	FY 2027
Fund	\$0	\$0	\$0	\$0
Total Revenue	\$0	\$0	\$0	\$0
Biennial Totals	\$0		\$0	
Object of Expenditure	FY 2024	FY 2025	FY 2026	FY 2027
Obj. C	\$10,422,000	\$5,544,000	\$6,906,000	\$7,472,000

Package Description

What is the problem, opportunity, or priority you are addressing with the request?

Washington law requires school districts to teach the Washington State K–12 Science Learning Standards, also referred to as the Next Generation Science Standards (NGSS), which set the expectations for what students should know and be able to do at each grade level. A key component of these standards is the expectation that students will themselves engage in the practices and not merely learn about them secondhand.

Unfortunately, a lack of resources—human, capital, time, and material—result in many students, particularly those in the elementary and middle grade levels, not having access to engaging, hands-on, interactive learning environments. This lack of access results in a disadvantage for many students in the areas of science, technology, engineering, and mathematics (STEM) in middle school, high school, and in the workplace. This lack of foundational science instruction leaves many students with a learning debt when entering high school and has a negative impact on students' self-identification with STEM learning and career pathways.

What is your proposed solution?

The Legislature has recognized and invested in numerous organizations and programs that specialize in creating and facilitating hands-on science learning for students across every grade band, and in providing educators with professional learning opportunities to support and complement the teaching of science. OSPI proposes the state further capitalize on its investment and better meet student needs through new, renewed, or increased appropriations to support four equally important areas of work:

1. Integrated, career connected, locally relevant, field-based learning.
2. Live, interactive, inquiry-based programs that take place virtually, in the classroom, and at a regional science center.
3. Expansion of a Salmon in Schools statewide collaborative.
4. Creation of powerful STEM engagement opportunities for students in a Southeast Washington regional science center.

What are you purchasing and how does it solve the problem?

Funding will allow OSPI to expand access to high-quality science education for K–12 students across Washington. Funding will support programs that focus on professional learning for educators, prioritize access to hands-on science instruction in underserved communities, and strengthen and celebrate regional science culture and industry on both the east and west sides of the state.

The components of this request are outlined below:

1. \$2 million for the 2023–25 biennium to expand support for the integration of environmental and sustainability content ([RCW 28A.300.444](#)). Funds will support educators in delivering high-quality science instruction through increased professional learning focused on incorporating state learning standards across subject areas into

hands-on, outdoor field research. Funds will also support dual language science programs and fund increased career and technical education (CTE) and dual credit opportunities related to environmental science, natural resources, and agriculture.

2. \$11.43 million for the 2023–25 biennium to deliver interactive science learning opportunities directly to students through a mobile science program that can travel to different school districts across the state.
3. \$2 million for the 2023–25 biennium to support student learning about and engagement with the important role of salmon in Washington state and the surrounding region. Funds will be used to purchase tanks and equipment for classrooms across the state, purchase salmon eggs, provide maintenance of classroom equipment, and provide necessary professional learning for educators.
4. A one-time investment of \$2.036 million in fiscal year 2024 to invest in a unique and cutting-edge science visitor’s center in Southeast Washington, establishing the region as a go-to destination for both foundational and advanced science learning for students across the state, particularly those in central and southeastern Washington.

What alternatives did you explore and why was this option chosen?

If not funded, the state will lose momentum achieved in recent years through investment in science partnerships and programs that benefit K–12 students and educators. This lack of investment will exacerbate the science access equity gap that persists among students experiencing poverty; students living in small and rural communities; and students of color. This gap limits their individual potential in STEM fields as well as our state’s ultimate potential in those fields. One alternative could be funding the development and maintenance of a program at OSPI to accomplish similar goals; however, the agency’s lack of involvement in curriculum-level work, and the expense and time needed to build such a program makes this solution less desirable. OSPI believes that this additional investment in community providers of hands-on science learning that have proven successful in K–12 schools across the state is the most efficient, effective, and equitable use of state dollars.

Performance Measures

Performance outcomes:

1. Educators across Washington will have access to science-focused professional learning, and students will have access to stronger science CTE and dual credit pathways.
2. Mobile science labs will visit more than double the number of schools currently reached, serving over 650 classrooms by the 2025–26 school year. Services will focus on high-poverty schools.
3. Over the next four years, more schools will be able to install and run Salmon in the Classroom programs, with nearly all high-poverty schools able to implement the program by year four.
4. Students across the state, particularly in central and southeastern Washington, will have access to a state-of-the-art interactive science visitor’s center, making the area a go-to for students and educators interested in science, particularly gravitational science. Pre-pandemic, the visitor’s center received 4,000 visitors, and they expect to attract 1 million by 2025.

Assumptions and Calculations

Expansion or alteration of a current program or service:

This proposal expands services provided by OSPI through:

1. Integrated, career connected, locally relevant, field-based learning – 2022 Senate Bill 5693, Sec. 522(10)(e).
2. Mobile science labs – 2018 Senate Bill 6032, Sec. 501(44).
3. Expansion of a salmon in schools statewide collaborative – 2022 Senate Bill 5693, Sec. 522(23).
4. Southeastern Washington science center – 2019 House Bill 1102, Sec. 6003(7).

Detailed assumptions and calculations:

1. The current FieldSTEM appropriation is \$750,000 annually; the requested funds will purchase an additional \$250,000 for professional development for educators in the areas of FieldSTEM from fiscal years 2024–27, bringing the total annual contract to \$1 million.
2. Funds in fiscal year 2024 will allow OSPI to contract with an organization to purchase \$1.49 million in program administration, \$4.35 million to purchase mobile laboratory vehicles, and \$1.296 million in assistance for school field trips. Program administration and field trip costs are expected to increase each year as the program grows, and costs such as fuel for mobile laboratories increases. The purchasing of the mobile laboratory vehicles is a one-time cost.
3. Funds will purchase a \$1 million annual contract to continue the Salmon in School program. The \$500,000 annual appropriation – which currently serves 64 schools – will be increased to \$1 million and expand into nearly all high poverty schools over the next four years (expanding each year between fiscal years 2024–27). Current funding is assumed to conclude at the end of fiscal year 2023.
4. \$2.036 million will purchase several new interactive exhibits at the LIGO Visitor’s Center in Richland, Washington. This will be a one-time investment in fiscal year 2024.

Workforce assumptions:

N/A

How is your proposal impacting equity in the state?

As measured by performance outcomes, the science education access gap is widest for groups traditionally marginalized in our state, including Black, Indigenous, and students of color; migrant and multilingual students; students living in high-poverty areas; and those who attend small and rural schools. The long-term consequence of this access gap is a decreasing self-identification with STEM career pathways, depriving both the state of potential STEM workers and these students of job opportunities in a high-income field. This proposal will focus new

resources on serving educators and students in underserved communities and building classroom-level region-specific immersive science opportunities for K–12 students.

At the forefront of every program, policy, and decision, OSPI actively focuses on ensuring all students have access to the instruction and support they need to succeed in our schools. OSPI regularly engages with a wide array of partners and stakeholders to continuously connect with students, families, and community representatives as partners in decision-making. OSPI facilitates and participates in a significant range of committees and workgroups, regularly engaging with a variety of stakeholders to ensure voices are heard and ideas are incorporated.

Strategic and Performance Outcomes

Strategic framework:

This proposal supports OSPI’s Strategic Goals #1, #2, and #3 by providing all Washington K–12 students with strong educational foundations; ensuring access to rigorous, learner-centered options in all communities; and supporting a highly skilled workforce through enhanced professional learning opportunities for educators engaging in science instruction.

Other Collateral Connections

Intergovernmental:

The LIGO portion of this request is supported by the National Science Foundation.

Stakeholder response:

This proposal is supported by Caltech, the Pacific Science Center, and the Pacific Education Institute. OSPI expects this request will receive support from educators and school districts across the state who have and will benefit from these programs.

Legal or administrative mandates:

N/A

Changes from current law:

N/A

State workforce impacts:

N/A

State facilities impacts:

N/A

Puget Sound recovery:

N/A

Other Documents

Reference documents:

N/A