

**Oregon Department of Education
STEM Hubs Computer Science Grant Parameters
Program Summary**

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Background

To address the inequities related to computer science (CS) education, Governor Kate Brown has [directed ODE and HECC](#) to develop a long-term implementation plan that is designed to achieve the following goals:

- That computer science education is made available to public school students on an equitable basis; and
- That computer science education be based on a framework that guides students from computer users to computer literate creators who are proficient in the concepts and practices of computer science, as informed by national frameworks and standards.

In addition to the long-term plan, the Governor is utilizing \$5 million in Governor’s Emergency Education (GEER) funds to increase access to computer science education and opportunity for students during the 2022-2023 school year. The focus of this document is on the distribution and use of those GEER funds.

Purpose & Definitions

The purpose of this grant program is to increase access, participation, and engagement in computer science opportunities of K-12 students in Oregon public schools with a focus on students who are historically and systemically underrepresented in computer science education and careers. Projects supported through this grant will serve as demonstrations of equitable computer science education that can inform the long-term statewide implementation plan. Projects may expand on existing opportunities, extend effective opportunities into new sites, or create new opportunities. All projects must include student participation during the 2022-2023 school year including summer 2023.

Access: Access refers to the **number of computer science (CS) opportunities** available to students. When accounting for “access,” quantitative data is central in that the focus is on increasing the number of opportunities available for students to access. Typically, access is measured at the secondary level in terms of specific courses. As CS at the elementary and middle school levels is more likely to be integrated into other content areas such as math and science, access is more difficult to measure quantitatively.

Community-Based Organizations (CBOs): In the context of this grant, CBOs are Culturally Specific Organizations that serve a particular cultural community and are primarily staffed and led by members of that community; these organizations demonstrate: intimate knowledge of lived experience of the community; knowledge of specific disparities, barriers or challenges documented in the community and how that influences the structure of their program or service; commitment to the community’s strength-based and self-driven thriving and resilience; ability to describe and adapt their services to the community’s cultural practices, health and safety beliefs/practices, positive cultural identity/pride, religious beliefs, etc.

Computer Science (CS): “Computer Science is the study of computers and algorithmic processes, including their principles, their hardware and software designs, their applications, and their impact on society” (Computer Science Teachers Association). Computer Science creates the conceptual and theoretical foundations related to computer literacy, educational technology, digital citizenship, and information technology. [The K-12 Computer Science Framework](#) identifies the core concepts and practices that help define a comprehensive computer science education.

Culturally Responsive/Sustaining CS Pedagogies: These are teaching and learning opportunities and practices in CS that recognize and reflect the diverse cultural characteristics of learners as assets. Culturally responsive and sustaining learning opportunities empower students intellectually, socially, emotionally and politically by using cultural referents to impart knowledge, skills and attitudes.

Engagement: Engagement takes into account the importance of **pedagogy, curriculum, instruction, and classroom environment**. Engagement includes a consideration of the historical inequities within CS in order to ensure that diverse identities are represented within the classroom pedagogically, through the instructional materials, teachers, and classroom environment. Engagement is most often measured qualitatively through empathy interviews, focus groups, end of course surveys etc. to understand students' confidence and sense of belonging within CS courses and the larger field of CS.

Historically and Systematically Underrepresented: The Governor’s CS Initiative calls for a specific focus on serving students who are historically and systematically underrepresented in CS with a particular focus on:

- Students of color
- Women

Participation: Participation refers to increasing the **number and diversity of students enrolled in CS opportunities**. A focus within CS research in the past decade has been to broaden overall participation in opportunities with focus on recruiting historically underrepresented students. Typically, participation is measured quantitatively through measuring the degree to which there is diverse representation of students within CS opportunities.

Timeline

Table 1

Date	Activity
8/1/22 – 8/15/22	Communication about full grant structure
8/15/22	Release grant criteria and application to STEM Hubs
On or Before 9/15/22	Initial submission of proposals
9/15/22 – 9/30/22	Review and clarify STEM Hub projects
9/30/22	Completed final requests from STEM Hubs
11/30/22*	Execution of grants
9/30/23	Final day for Hubs to expend grant funds
10/31/23	Final reporting from grant recipients

* Dependent upon ODE Procurement Timelines

Eligible Recipients

These grants will be issued to Oregon STEM Hubs through their identified fiscal agent as Intergovernmental Agreements (IGAs).

- Projects that engage Community Based Organizations (CBOs) and public school districts in planning and implementation are preferred.
- STEM Hubs may issue contracts for materials and services to achieve the purpose of the grant, however, federal rules prohibit eligible recipients from issuing sub-grant awards. Any capital expenses (expenses over \$5,000) will require pre approval by ODE.
- Projects may expand on existing opportunities, extend effective opportunities into new sites, or create new opportunities as long as public school students are able to engage in those opportunities during the 2022-2023 school year including summer (June, July, and August) 2023.

Funding Availability

Recipient Allocation

An allocation of \$5.0 million is designated for projects proposed by STEM Hubs. These funds will be awarded as grants through a formula-based model that:

- Incorporates the total student count, students in poverty based on Small Area Income and Poverty Estimates (SAIPE) rate, and ELL student rate for districts in each STEM Hub region. These parameters were chosen to align most closely with the directive's focus on gender and students of color.
- Emphasizes total student count as the dominant weighting with additional weight added for poverty and ELL rates.

Table 2

STEM Hub	Initial Distribution
South Metro STEM Partnership (SMSP)	\$1,179,087.66
Portland Metro STEM Partnership (PMSP)	\$726,346.60
Greater Oregon STEM (GOSTEM)	\$489,578.63
Southern Oregon STEM	\$407,298.90
Lane County STEM	\$390,820.61
East Metro STEAM Partnership (EMSP)	\$306,223.16
Central Oregon STEM	\$288,905.30
Mid-Valley STEM-CTE	\$278,935.38
Oregon Coast STEM	\$267,924.05
Umpqua Valley STEAM	\$203,880.56
Northwest STEM	\$155,838.75
Columbia Gorge STEM	\$155,592.29
Frontier Oregon STEM	\$149,568.12
Total Allocation	\$5,000,000

Redistribution of Funds

ODE strives to utilize the entire \$5.0 million allocation but also recognizes that the initial distribution may not represent the actual needs or capacity of individual STEM Hubs. To accommodate this, the final distribution of funds may be adjusted by ODE in collaboration with STEM Hubs to accommodate:

1. Requests for two or more Hubs to work in consortia.
2. Funding requests from Hubs or consortia that are less than the initial distribution.
3. Requests by individual Hubs to withdraw from participation requiring a redistribution of those funds.

Expenditure Period

All services and purchases must occur from September 30, 2022 through September 29, 2023. Requests for reimbursement for those services and purchases must be submitted to EGMS no later than November 13, 2023. Final reimbursements will be approved upon receipt of the required final reporting.

Grant Procedures

To participate in the STEM Hub Computer Science Grant, all eligible recipients must submit an initial application by September 15, 2022. Grant applications will be reviewed by ODE staff to assure they

address the overall purpose of the grant and the grant criteria. ODE may request revisions to any proposal or clarification about the proposal before final acceptance. Once applications are accepted, recipients must enter into a grant agreement with ODE that outlines eligible uses, program requirements, and reporting requirements for grant funding. Grant agreements will be executed by November 30, 2022 depending on procurement timelines.

Program Criteria

Proposals **must**:

- Serve students in public K-12 schools.
- Include student participation during the 2022-2023 school year including summer 2023.
- Address the criteria listed in the table below.

Proposals **may**:

- Expand on existing opportunities, extend effective opportunities into new sites, or create new opportunities.
- Employ any of the strategies listed in the table below.

Table 3

Criteria	Possible Strategies to Meet Criteria
<p>Increase Access Increase the number of CS education opportunities and/or increase capacity in existing opportunities.</p>	<ul style="list-style-type: none"> ● Increase number or existing course sections. ● Integrate CS into existing non-CS curriculum. ● Expand after school programs to include CS ● Increase capacity in existing after school or enrichment CS programs by adding staffing and/or materials. ● Offer a new CS program or course that would increase the number of students engaged in CS education.
<p>Diversify Participation through Equity and Inclusion Increase the diversity of students participating in CS opportunities with a focus on students historically and systemically underrepresented in computer science.</p>	<ul style="list-style-type: none"> ● Collaborate with CBOs to plan and/or implement the CS project. ● Intentionally include students’ families and funds of knowledge in development and implementation of a project. ● Partner with counselors and other adults who regularly assist students in making career and course decisions to promote inclusive recruitment practices. ● Run recruitment activities at events or places that currently engage students who are historically and systemically underrepresented in CS. ● Develop strategies to retain students who are historically and systemically underrepresented in CS.
<p>Support Equity-Based Systemic Change Align projects with other current and/or future computer science opportunities grounded in equity at the building or district level, including work</p>	<ul style="list-style-type: none"> ● Clearly communicate possible next-steps for students who have participated in these funded CS opportunities including additional after-school activities, additional courses, or Career Connected Learning including CTE. ● Develop sustained opportunities for recruiting and retaining students who are traditionally not engaged in CS. ● Promote collaborative planning across classrooms or grade levels

Criteria	Possible Strategies to Meet Criteria
with CTE Regional Coordinators and CTE programs to support strong inclusive CTE programs in computer science.	<p>to engage multiple educators in one district.</p> <ul style="list-style-type: none"> ● Support ongoing teacher professional learning. ● Increase diverse systems of support for staff engaged in CS education. ● Develop systems to recruit and retain diverse CS educators. ● Support activities in elementary and middle schools that could feed into a current or future CTE Programs of Study.
<p>Strengthen Engagement and Sense of Belonging in Computer Science Retain historically and systemically underrepresented students in computer science opportunities using equity-based strategies and integration of career connected learning.</p>	<ul style="list-style-type: none"> ● Use existing equity-based CS frameworks such as the The K-12 Computer Science Framework when reviewing or developing instructional practices and curriculum. ● Embed culturally responsive/sustaining CS pedagogies within the curriculum. ● Embed Inquiry-based pedagogy into CS activities ● Provide connection to diverse role models, mentors, and other CS experts.
<p>Engage Community Based Organizations Connect communities to the planning and implementation of CS education to build culturally relevant instruction and sustainable programs.</p>	<ul style="list-style-type: none"> ● Center community voice in ensuring equity-based computer science planning and implementation. ● Develop communication that will help community awareness of the relevance and importance of CS education. ● Review instructional resources from a culturally relevant perspective. ● Provide guest speakers or instructors from diverse backgrounds. ● Develop new instructional resources from a culturally relevant perspective.

Eligible Uses of Funds

These Federal funds may be used for the following purposes:

- Contracts for grant-related services such as:
 - Professional development.
 - Educator time to attend meetings and workshops and/or provide instruction to students related to project development and implementation.
 - Development of public communication resources.
 - Development of instructional resources.
 - Rental of meeting spaces.
 - Per diem associated with professional development activities. All per diem must be consistent with Federal rules and regulations.
 - Personnel costs associated with planning and implementation of the grant activities.
- Purchase of grant related materials such as:
 - Technology (computer hardware and software) for educators and students that are necessary for implementation of the project.

- Expendable supplies for professional development activities.
- Expendable supplies for student use during the grant period.
- Licenses for instructional materials used during the grant period.
- Administrative costs that do not exceed the ODE approved indirect rate.

These Federal funds may not be used for the following purposes:

- Programs limited to single-gender activities that violate provisions of Title IX.
- Costs associated with construction and other capital expenses unless pre approved by ODE.
- Travel outside of Oregon without prior consent from ODE.
- Equipment and supplies that are dedicated solely to administrative functions.
- Sub-awards to other entities (funds may be sub-contracted for services or materials).

Reimbursement Requirements

Claims for reimbursement are made in the Electronic Grants Management System (EGMS). ODE may request an itemized accounting for claims submitted before reimbursement is approved.

Reporting Requirements

No later than **October 31, 2023**, recipients will provide a final report that includes the following:

- Total number of students newly engaged in CS activities funded by this grant disaggregated by:
 - Gender
 - Race/Ethnicity
 - Grade
 - School District
- Funded program summary including any of the following that are appropriate to the project activities:
 - Program overview (include links to any relevant resources)
 - Program design (i.e. embedded in classrooms, after school activity, elective course, etc.) and opportunities for students to continue after the program to continue to grow their CS interests and skills
 - Summary of what was particularly effective in increasing access, participation, and engagements of students, particularly women and students of color
 - Summary of challenges encountered in increasing access, participation, and engagements of students, particularly women and students of color
 - Descriptions of strategies incorporated to increase engagement by students who are historically underrepresented and regularly marginalized in CS
 - Information on how families and students were engaged in planning and/or implementation
 - How role-models and mentors were used to create an inclusive environment