Computer Science and Digital Literacy

Participating Hubs

Central Oregon STEM Hub
Columbia Gorge STEM Hub
Frontier STEM Hub
Lane STEM Hub
Mid-Valley STEM-CTE Hub
Northwest STEM Hub
Oregon Coast STEM Hub
Portland Metro STEM Partnership
South Metro Salem STEM Hub
Umpqua Valley STEAM Hub

Grant Overview

This collaboration aimed to increase equity and access to Computer Science (CS) and Digital Literacy (DL) as a statewide network, through identification of Hub communities that have overlapping needs and goals. The project allowed Hubs to deliver student experiences, expand professional development to teachers, and contribute to a stronger system and network around CS. In the previous biennium, some Hubs (4) worked with SCRIPT to become trainers, a process that supports districts over 2-3 years to adopt CS standards. Those four regions (Lane, Gorge, Frontier, and Central Oregon) continued this work in 2021-2023 to support their districts in the adoption of K-12 standards. For new initiatives in 2021-23 the Hub Directors felt it was important to assess the ecosystem to better understand what programs exists and what programs are missing. Therefore, they

conducted a statewide survey of schools, partners, and other community stakeholders. The results of that survey were shared with Oregon STEM and the STEM Investment Council. Similarly, Hubs gathered data to understand the scope of programming and devices that were being used in schools, as well as PD opportunities that were available to Oregon educators. Once the information was collected on PD opportunities, each Hub worked with teachers in their region to market the information and recruit teachers. Specifically, Hubs recruited and supported teachers enrolling in the Expanding Computer Science summer program, quarterly BeeBot trainings, and externships.

Addressing Equity

The goal of this project was to organize, for the first time, the efforts of the Hubs to share information, expand best practices, and delve into the CS/DL efforts that have historically been fragmented or nonexistent. This is even more apparent in the rural communities where resources are scarce, connectivity is disparate, and there are fewer partners and industries to support the efforts. This approach increased access as a statewide network and identified Hub communities that have overlapping needs and goals so Hubs can deliver experiences to students, expand professional development to teachers, and contribute to a stronger system and network around CS. By focusing on these

three pieces, Hubs hope to increase the number of marginalized youths who are accessing computer science. comes Across the Network

Strategies

Working with Math and CS integration within schools and districts.

Working with post-secondary institutions to identify and support and increase in dual credit opportunities.

Working with elementary teachers to integrate learning into classrooms.

Working with Districts to adopt and implement K-12 CS standards, identification of pathways, technology needs, leadership support, and community partnerships.

Creating centralized community computer science opportunities to increase access for students.

Establishment of a CS/DL community of practice in rural regions with limited previous investments in CS/DL.

Highlight best practices for scaling and replication in rural areas with limited CS programs.