



OREGON
DEPARTMENT OF
EDUCATION



Organization

Backbone Organization: Portland State University
Counties in Region: Multnomah, Washington
Sq. Miles in Region: 1,192
STEM Hub Director: Kristen Harrison
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By the Numbers

School Districts	5
Students	108,005
Educators Participating in PD	457
Educator Hours in PD	6,585
Students Participated in Programs	8,583
Hours of Programming Offered	1,486
Student Hours in STEM Programs	161,412

Middle School Math in Real Life: Connecting Standards to Career Pathways

Over the past year, Portland Metro STEM Partnership, Portland Public Schools, Beaverton School District, and Hillsboro School District collaborated to improve middle school math outcomes and ensure students are prepared for Algebra in 8th grade and high school math pathways. The impact has been substantial. Seventy-five educators representing 19 schools worked collaboratively across district boundaries to develop and pilot applied math units, reaching over 2,000 students during the pilot year. Two new district-approved middle school courses now offer students broader options for meeting math requirements and increased opportunities for career exploration. Teachers piloted the curriculum in 2024-2025 and are expanding instruction throughout the 2025-2026 school year.



The result is Middle School Math in Real Life (MS MiRL), an open-source curriculum meeting Oregon math standards while emphasizing career connections and authentic problem-solving contexts. "Preliminary assessments show that students receiving MS MiRL instruction are demonstrating at least one level of proficiency improvement on standards covered in the curriculum, as measured by STAR and course-based assessments," said an Academic Coach from Beaverton School District. This initiative aligns with Governor Kotek's statewide goal of increasing 8th grade math proficiency, contributing to SB 141, which became law in June 2025. Students apply geometric reasoning to architecture, art, and culture; use data reasoning to explore Oregon ecology and wildlife issues; and employ algebraic reasoning in business planning, operations, and management.

Patterns High School Science: Expanding Equitable Access

In the mid-2010s, most Oregon high schools lacked a comprehensive approach to science instruction. As a result, students were offered unequal opportunities to take a full sequence of science courses (particularly Physics). To address this, Portland Metro STEM Partnership (PMSP) partnered with Beaverton School District to build out the Patterns High School Science curriculum for grades 9-11, and professional development to support teachers to implement the curriculum successfully. The initiative has expanded through collaborations with Hillsboro School District, Portland Public Schools, GO STEM, OSU Center for STEM Learning, and districts statewide. The impact has been transformative: Physics course access has surged from as low as 5.8% to as high as 99% in participating schools, and an estimated 48,289 Oregon students—approximately 35% of all students in grades 9-11—participated in Patterns courses during 2024-2025.

With support from the Oregon Department of Education's Well Rounded Access Program grant, PMSP recently expanded the curriculum significantly. All courses are now available in Spanish, two new Chemistry units and one Biology unit have been developed, arts integration spans all three courses, and Oregon's Tribal History/Shared History lessons are embedded throughout. The refreshed website, <https://hsscience4all.org/>, provides enhanced teacher access to these free, comprehensive resources.



Tri-Hub Collaboratory: Expanding Out-of-School STEM Access

Community-based organizations serve youth across STEM hub boundaries. To leverage collective regional action, Portland Metro STEM Partnership joined with East Metro STEAM Partnership and South Metro-Salem STEM Partnership to develop a Tri-Hub Collaboratory, expanding networking, professional development, and coaching to educators from all three regions. The impact has been significant. Over the past year, 167 OST educators participated in professional development and networking events. These educators collectively serve an estimated 11,920 students in programs such as Outdoor School and Schools Uniting Neighborhoods (SUN), which provide free or low-cost youth programming.

Collectively, the Tri-Hub Collaboratory hubs serve 54% of Oregon's students. This collaboration addresses the growing need to prepare students for next-generation STEM pathways and careers, with particular focus on youth historically underrepresented in STEM, including girls, students from low-income backgrounds, and students of color. One key strategy involves leading a network of Out-of-School Time (OST) educators called the Collaboratory, creating a learning lab of STEM expertise across content areas while providing high-quality professional development tailored for OST contexts. The three hubs co-funded a Community STEAM Navigator position to coordinate OST Collaboratory activities and professional development, leading workshops, providing coaching, hosting sessions, and building key partnerships across the region.