

STEM Investment Council - September 2018 Update

A snapshot of our work and impacts

Fast Facts

- Provided professional development to **867 educators**, totaling **1,0292 person-hours**, with the potential of impacting a projected **74,672 students**. (Summer 2017 to Summer 2018)
 - State STEM Plan Goal Area 3
- Engaged **243 partners** in networking and peer-learning opportunities totaling **480 person-hours**. (Summer 2017 to Summer 2018)
 - State STEM Plan Goal Area 3
- Support to **11 STEM-focused elementary schools and two middle schools**, reaching a projected 4,000+ students annually
 - State STEM Plan Goal Areas 1-3
- Provide **planning support to nine additional schools** (elementary and K-8) seeking to become STEM-focused, reaching a projected 3,000 students annually
 - State STEM Plan Goal Areas 1-3

STEM Leadership Academy for Administrators [State STEM Plan Goal Areas 1-4]

- 10-month learning opportunity for elementary building principals and their supervisors to deepen their understanding of STEM teaching & learning, effective leadership models that support high academic achievement, and tools & resources to support their role.
- 22 administrators across six districts, served by three STEM Hubs: PMSP as lead, with support from EMSP and SMSP.
- Participants will engage in close to 40 hours of in-depth professional development designed to support their current roles and responsibilities.
- 8-member advisory group representing districts and higher ed provides input. More info: <http://bit.ly/STEM-leadership-academy>

Regional High School Science Curriculum [State STEM Plan Goal Areas 1-4]

- Three-year science curriculum consisting of freshman physics, sophomore chemistry, and junior biology courses aligned to the Next Generation Science Standards (NGSS)
- Each of these core content science courses utilizes engineering design challenges, emphasizes math modeling, and uses data to understand phenomena to predict the future.
- Patterns Physics is currently being implemented in Beaverton, Hillsboro, and Portland, three of the largest districts in Oregon serving approximately 20% of the students in our state. Beaverton and Portland are implementing Chemistry fully this year.
- Approximately 16 districts across the state are in some phase of considering, piloting, and/or adopting this curriculum (Full adoptions occurs over a three year process). Districts include Redmond, Hood River, Greater Albany, Centennial, North Bend, Gresham-Barlow, and Oregon City, among others. With this expanded reach, the science sequence is on pace to reach 32% of high school freshman this year.
- PMSP also provides summer professional development specific to this curriculum. These 3-5 day summer courses have been delivered each summer since 2012 with a total of 433 teacher participants receiving over 12,900 total instructional hours on the NGSS. This year alone, there are 89 freshman science teachers in our region collaborating to implement the Patterns

Physics curriculum. (This PD is self-funded and provides limited revenue to support teachers in reviewing, vetting, and updating teacher-developed resources and iterating the curriculum).

- The Oregon Community Foundation Career-Connected Learning grant is supporting the addition of career-connections into the existing curriculum.

Early Learning STEM Kits & Workshops for Families and Early Learning Educators

- Working with Early Learning Washington County (ELWC), PMSP provided two half-day trainings for 60 parents and early learning educators to help them provide great STEM activities for their children/youth in their programs. PMSP also collaborated with ELWC and several culturally specific community organizations to develop STEM kits for youth ages 3-6 that encourage youth and families to Observe, Explore, Design, Question and Build. Available in four languages, 2000 “Curiosity Kits” were distributed to youth in Washington County. Press Release - <http://bit.ly/EarlyLearningSTEM> [State STEM Plan Goal Areas 1-3]
- PMSP supported a similar project with Early Learning Multnomah (ELM) to develop culturally specific STEM kits for families of children aged 0-5. These kits are designed to be culturally relevant for members of the African American, Somali, Latino, Vietnamese, Russian and Arabic communities. [State STEM Plan Goal Areas 1-2]

Summer STEM Program for Middle School Students [State STEM Plan Goal Areas 1-3]

- Specifically designed to support ELL, Migrant, and Students of Color in grades 6 or 7 with a focus on Science, Technology, Engineering, and Math.
- Began in 2017 and has served over 400 students
 - 97% students of color
 - 44% migrant students
 - 79% English Language Learners
- Students are involved in engineering design challenges that incorporate science, math, technology, and language development; In this case, design and build a canoe that will support the teacher. (Please do not re-use photos without written permission from Portland Metro STEM Partnership)

