STEM Innovation Grants: Core STE(A)M

Background

The purpose of the STEM Innovation Grant Program is to award grants that expand the implementation of effective programs related to science, technology, engineering and mathematics, that: (1) propose innovative approaches to STEM-based education; or (2) provide professional development relating to science, technology, engineering and mathematics (OAR 581-017-0321). STEM Innovation Grants are also specifically established to help close the achievement gap for students who are historically underserved and/or underrepresented in STEM (OAR 581-017-0327). STEM Innovation Grants are awarded to the 13 Regional STEM Hubs for programming efforts each biennium. For the 23-25 Biennium, projects were submitted via a request for application and all proposed activities aligned to the required grant criteria. This Biennium, STEM Hubs collaborated together to develop their proposed budget allocations and activities and identified four collective areas of alignment across projects, including: Core STEM, Pathways to STEM, Early STEAM, and Community STEM. In addition, STEM Hub Directors and the Oregon Department of Education (ODE) worked together as a network to finalize shared outcome measures for each project.

Core STE(A)M

Purpose: To embed integrated STE(A)M activities into core subject areas, such as Science and Mathematics. Alignment of integrated STE(A)M activities to state academic standards in core subjects can help engage students, reduce opportunity gaps, and raise student achievement in school by bringing relevance to career interests, local issues, and global problems.

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Alignment with the STEM Education Plan Goals

The Core STE(A)M project is aligned with three of the 2021-25 STEM Education Plan Goals which include:

- Goal 1: Inspire and empower our students to develop the knowledge, skills, and mindsets necessary to thrive in a rapidly changing, technologically rich, global society.
- Goal 2: Ensure equitable opportunities and access for every student to become a part of an inclusive innovation economy.

- Goals 3: Continuously improve the effectiveness, support, and number of formal and informal P-20 STEM educators.
- Goals 4: Develop a sustainable funding and policy environment for STEM and CTE that provides reliable, seamless, and sufficient support across biennia.

These goals emphasize:

- Incorporation of applied learning
- Increased STEM time
- Reformation of curricula
- High-quality Professional Development

Core STE(A)M Activities

Strategies employed across the state to strengthen the work in embedding STE(A)M include:

- Professional Development aligned to Oregon's academic standards 1-12 STEM program delivery
- Leadership skill development opportunities
- Resource development and dissemination to support existing STEM integration efforts, including:
  - STEM Integration
  - K-8 STEM School Designation
  - Elementary and Rural STEAM Leader Development
  - Place-based, culturally responsive PD and curriculum
  - Grade-level Communities of Practice

HIGH SCHOOL STUDENTS WORKING THROUGH PATTERNS SCIENCE