

STEM Investment Council UPDATE

Lindsey Capps
Chief Education Officer (Acting)

Jim Piro
Chair, STEM Investment Council

Mark Lewis
STEM Policy Director



Connecting Education to Careers

Oregon CTE Investments

- CTE Revitalization Grants
- Regional & Summer Programs
- Sustainable Funding

Shared Outcomes

- Economic prosperity
- Increased graduation rates
- · Career and college readiness
- Equity for underserved students
- Student motivation & engagement
- Academic and technical proficiency
- Creativity, critical thinking, problemsolving, communication

Shared Approaches

- · Hands-on/minds-on
- Community-based, purpose-driven
- Interdisciplinary learning
- Opportunities for student choice
- Authentic, "messy" problem-solving
- Using data & analytics
- Innovation & entrepreneurship
- Industry partnerships
- Early career experiences

Shared High-demand Careers

- Health Sciences
- Engineering & Construction
- Advanced Manufacturing
- · Computer Science & IT
- Precision Agriculture & Food processing

Oregon STEM Investments

- Regional STEM Hub Network
- Innovation Grants
- High-demand Post-Secondary Programs



STEM Investment Council

Chief Education Officer

Higher Education Coordinating Commission

Universities Community Colleges

Oregon Department of Education

Early Learning Division

Youth Development Council

STEM Investment Council

- Develop STEM Strategy
- Engage industry & other partners
- Guide & support innovation initiatives
- Recommend investments and policies
- Define outcomes & metrics
- Monitor impact of investments

Advisory Committee

- Established by HB 2636 (2013)
- Advance Science, Engineering, Technology and Mathematics (STEM) education goals to drive economic growth:
 - By 2025, double number of students proficient in math and science
 - By 2025, double post-secondary STEM degrees and certificates

High Quality Jobs

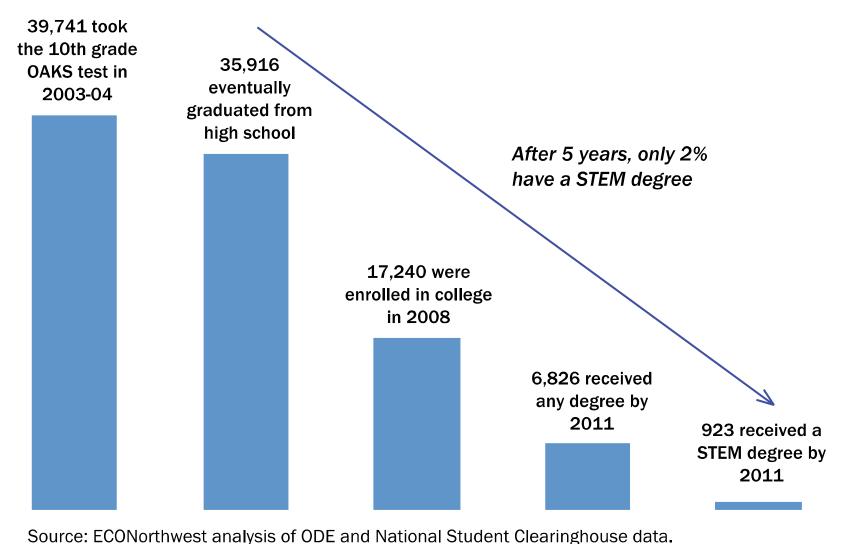
	Non-STEM Job	STEM Job	% Difference
High School Diploma or Less	\$15.55	\$24.82	60%
Some College or Associate Degree	\$19.02	\$26.63	40%
Bachelor's Degree Only	\$28.27	\$35.81	27%
Graduate Degree	\$36.22	\$40.69	12%

STEM = higher lifetime earnings (~25% more on average)

- ➤ Higher state tax revenues
- ➤ More \$ in the economy
- Family wage jobs and break cycle of poverty
- Decreased reliance on social services



STEM Outcomes for the Class of 2005



Strategic Planning

- Draft available for public comment
- Convening public focus groups
- Engaging with professional organizations
- Final STEM Investment Council Action this Spring
- State Board of Education and Higher Education Coordinating Commission

Data & Metrics

- Defined STEM jobs
- Defining STEM degrees and certificates
- Identified initial student, educator, and systems metrics
- Gathering baseline data for Strategic Plan

Communications

Communications framework developed

Vision: To build an inclusive, sustainable, innovation-based economy by reimagining and transforming how we educate and empower individuals and communities.

GOALS

- 1. Inspire and empower our students to develop the knowledge, skills, and mindsets necessary to thrive in a rapidly-changing, technologically rich, global society.
- **2. Ensure equitable opportunities and access** for every student to become a part of an inclusive innovation economy.
- **3.** Continuously improve the effectiveness, access to resources, and the number of formal and informal STEM educators.
- **4. Create sustainable and supportive conditions** to achieve STEM outcomes aligned to Oregon's economic, education, and community goals.

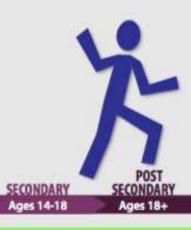


Student Outcomes









Increase the number of Oregonians filling STEM-related Jobs in Oregon

WORKFORCE



Increase alignment of degree and certificates with high-wage, high-demand jobs



Increase positive STEM identity and motivation

Incredse participation in inquiry-based activities

Increase college and career readiness**

Increase moth and science achievement scores

Increase digital ineracy and quantitative reasoning skills

Increase STEM career awareness

Increase participation in out-of-school STEM experiences and programs especially for students of color and /or in poverty

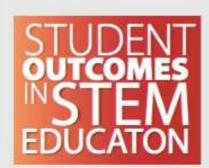
Increase high school graduation rates

Increase college credits earned in high school Increase collegegoing rates, particularly for students of color and/or in poverty

Increase postsecondary STEM certificates and degrees, particularly for women and students of color

> Decrease postsecondary enrollments in remedial mathematics

- In order to view all outcomes through an <u>equiliblens</u>, data will be disaggregated by race/ethnicity, gender, and socioeconomic status.
- ** See <u>College and Career Readiness</u> <u>Definition for Oregon</u> (adopted April 8, 2014 by the OEI8)



What?

 Collaborative partnerships: K-12, workforce boards, economic dev, postsecondary, out of school programs, business/industry, civic leaders.

Why?

- Take collective responsibility for education in and out of school
- Breakdown systemic isolation at all levels
- Support regional solutions to regional needs
- Accelerate spread of promising practices across state
- Increase connections between the field with policy and research

How?

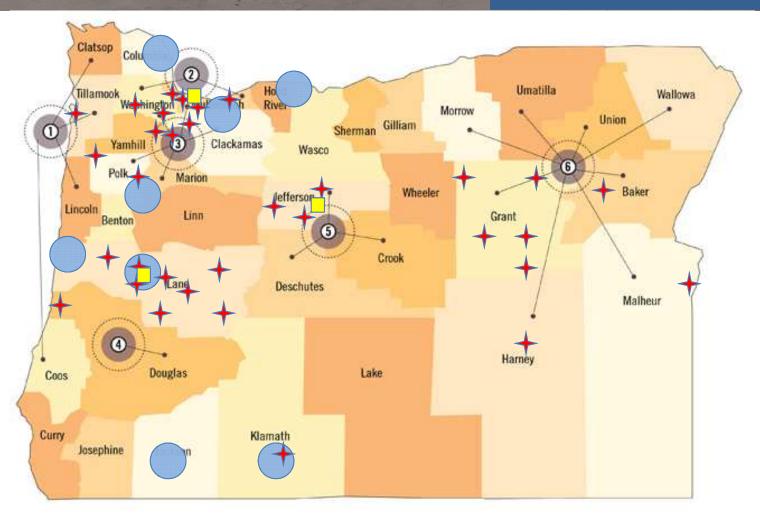
- Educator professional development
- Industry partnerships (internships, mentoring, etc.)
- Aligning assets & programs to goals
- Bridging programs
- Access to quality out of school experiences

One Hub leveraged state funding:

\$600K → \$3.4M



2013-15 STEM Investments





→ STEM/STEAM/CTE grants, \$2.5m

Un-funded Hub Applicant

STEM Lab Schools, \$2.2m

HB 3072

Regional STEM Hubs, \$5m

- "Backbone" Coordination functions
- Program Funding
- Scale-up Initiatives

STEM Innovation Grants, \$4.75m

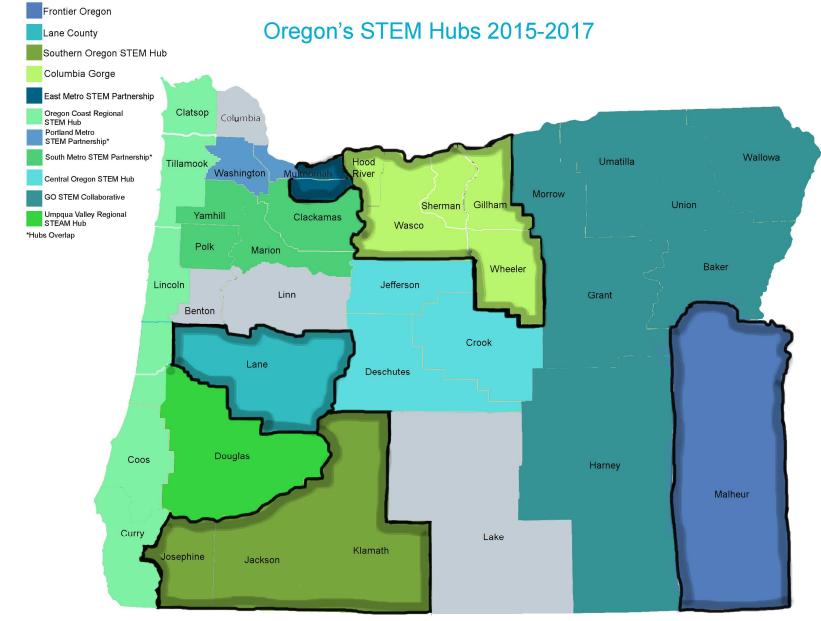
- Mathematics
 - Pilot adaptive learning platforms
 - "Math in real life" contextualized professional development
- Digital Literacy & Computer Science
- Out of School network and programs

Post Secondary Success, \$2m

- Underserved and underrepresented students
- ❖ Support services: Recruitment, retention, attainment







Questions?