



STEM - Strategic Plan Development Subcommittee

MEMBERS: Thompson Morrison (Chair), Herb Fricke, Jessica Gomez,

February 12, 2015

8:30am – 10:30am

Smith Memorial Student Union, Room 328,
1825 SW Broadway, Portland 97201

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AGENDA

1. Final draft mission statement

2. Final draft Manifesto

3. Initial Goals & Strategies

4. Timeline and next steps

5. Public Comment

Members of the public wanting to give public testimony must sign in.

There will only be one speaker from each group.

Each individual speaker or group spokesman will have three (3) minutes.

All meetings of the STEM Investment Council are open to the public and will conform to Oregon public meetings laws. The upcoming meeting schedule and materials from past meetings are posted online. A request for an interpreter for the hearing impaired or for accommodations for people with disabilities should be made to Seth Allen at 503-378-8213 or by email at Seth.Allen@state.or.us. Requests for accommodation should be made at least 48 hours in advance.

DRAFT: The Oregon STEM Manifesto

Our Vision

Reimagine and transform how we educate and empower individuals and communities to build an inclusive, innovation-based economy. Oregonians of all races, economic status, and locations have developed the fundamental STEM skills and mindsets necessary to:

- Fully contribute to an increasingly complex and technologically rich global society
- Address high-demand workforce and industry needs
- Improve the prosperity of individuals and communities across the State
- Become creative, life-long learners who can adapt to changing social and economic condition

Our Beliefs

1. **All people create.** Our students should not just be consumers of knowledge, they need to be creators of it in a way that unleashes their creative genius, interests, and talents.
2. **Each student deserves an opportunity at prosperity.** There continue to be persistent inequities for women and students of color in high-wage, high demand professions. Further, many students in poverty and from rural areas are being left behind. No talent should be left on the table.
3. **Diversity is our strength.** Differences of thought, culture, gender and ethnicity provide critical perspectives and voices to address today's complex challenges. Innovation emerges where different ideas and cultures intermingle.
4. **Engaged learners succeed.** *How* we teach our students is as important as *what* we teach them. We must create meaningful learning experiences that empower students to embrace their curiosity and take ownership of their learning.
5. **Education is a collective responsibility.** Effective STEM learning takes place both in and outside of classrooms. Everyone in our community is a potential educator and we need to build solutions that develop partnerships with all of the human capital in our communities.
6. **Innovation is the cornerstone of prosperity.** STEM is not just about filling jobs but creating jobs. Building an innovation-based economy is essential long-term prosperity resulting in competitive advantage in a global marketplace.
7. **Learning takes courage, persistence, and humility.** Pushing the boundaries of one's understanding requires us to embrace ambiguity and to take intellectual risks. What we do with what we don't know is as important as what we do know. We should prioritize questions over answers.
8. **STEM skills are essential skills.** Advancements in technology and information are transforming every industrial sector from agriculture to energy, medicine to manufacturing, forestry to nanotechnology.
9. **All learning is cross disciplinary.** It is the interconnectedness of ideas that enable people to integrate new learning with their prior experiences. STEM by its nature synthesizes analytical and creative thinking. It is a powerful tool that sits at the crossroads of the sciences, arts and humanities.
10. **The best way to learn STEM, is to DO it.** Education is not about retaining facts or disconnected bits of information. Utilizing purpose driven learning challenges students to pursue deeper questions and to solve problems that are relevant and meaningful.

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Our Goals

1. **Align supply and demand** - Increase number and diversity of students who successfully complete post-secondary credentials (degrees and certificates) in high-demand STEM fields
2. **Increasing potential** - Increase student interest in STEM by increasing literacy, confidence, awareness, and achievement for all students.
3. **Broader access** – Each Oregon student needs access to effective STEM instruction and high-quality hands-on learning environments, both in, and out of school.
4. **Improve capacity** - Increase the quantity and effectiveness of P-16 STEM educators, both in and out of school.

Potential additions:

5. **Build public awareness and support** - Increase the understanding of Oregonians about the critical importance of STEM to their own economic competitiveness and to that of the state.
6. Explicit equity goal? If so, how is this defined.

Our Plan

1. **Build statewide partnerships for STEM education.** Utilizing Regional STEM Hubs and other professional networks, we will connect, align and leverage assets from around the state to develop and disseminate promising practices and resources for STEM education. At a local level, STEM practitioners and educators will work closely to increase access and quality of STEM educational experiences both in and out of school. Support for this connected ecosystem of practitioners is essential to increase communication, spreading strategies that work, learning with and from each other, and providing critical feedback to inform policy and investment decisions.
2. **Change the perception of STEM careers.** Working with industry and institution partners, we will develop a statewide marketing campaign that conveys the creative nature of these careers and encourages participation of all members of our community, particularly reaching communities of color. The campaign will also convey to all Oregonians the relevance and importance of technology-enabled innovations to drive economic growth in all sectors of economy. Locally, there also needs to be more opportunities for students to interact with STEM employees and to engage in apprenticeships, internships, and research.
3. **Create transformative professional development for our educators and educational leaders.** Quality learning requires knowledgeable, confident, and supported educators. In order to realize our vision for richly-contextualized, purpose-driven educational experiences for students, educators must have the opportunity to deepen their own learning, transform the professional culture in their schools, and have the

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opportunity to interact with peers and STEM professionals. STEM education not only opens the door to new toolsets and mindsets, but also shapes new learning models that will impact all areas of education and better inspire life-long educational journeys.

4. **Develop a sustainable funding and policy environment.** In order to realize these these transformational aspirations, we must create the enabling conditions for change to occur. This will take a combination of leadership, resources, collective will, and outcomes-oriented funding. Our plan aligns corporate, state and philanthropic resources to provide stable funding streams that lead to sustained change.