Catalyzing STEM success for the next generation of Oregonians

Melissa Dubois, Director, South Metro Salem STEM Partnership

Proudly hosted by

NASA
National Space Grant Fellowship Program
Oregon Tech
NESSP Northwest Earth and Space Sciences Pipeline
16 school districts
6 higher education institutions
10 industry partners
~20 community organizations

Catalyzing Oregon students to achieve STEM degrees and certificates by increasing access, excitement and engagement of students in STEM courses and learning.
Core Strategy 1
Authentic STEM Learning:
Connect educators and students with community resources and industry expertise

Core Strategy 2
Sharing best practices:
Develop a STEM Leadership Team of teachers and community partners

Core Strategy 3
Accelerate Learning:
Expand STEM Accelerated Credit Opportunities

Making connections for student success

2014-25
Increase Participation, Persistence, and Achievement in STEM across all ethnic/cultural and/or socioeconomic background, limited English language proficiency, gender, or disability

By 2025
- Increase the percentage of students that are Math and Science Proficient
- Increase STEM college graduation/certification rates

Beyond 2025
- Improve Oregon business access to Oregon-educated STEM talent
- Support our communities with highly-skilled Oregon graduates who have access to family-wage jobs, are scientifically literate, and engaged in their communities.
20 teachers
1200 students
NGSS, Engineering/Programming
OSIRIS REx Mission and MIT Zero Robotics
Barriers to Education-Industry Engagement

But….HOW do I do that?

Power of Leverage

EQUALITY  EQUITY
In-person experiences, locally managed

Virtual Connections, International reach
The Goals – What and Why?

Empower teachers to connect their classroom to the **world**, helping young people make connections between what they are learning and **how it is used**, the **kinds of jobs** people do that apply those concepts, and the **real people** who do those jobs for a living.
Oregon Connections

Light and sound transmission
Facility tour

Field Trip/Company Visit

Constructing a Prototype Structure

Earthquakes

Description
My class is studying how to reduce the impact of flooding. They have drawn specific blueprints for a design and now they need to create a prototype of their structure.

Key Questions
What materials do they use to build prototypes?
Michael Lutomski

Occupy Mars!

Director of System Safety and Reliability, SpaceX and Former NASA
Manhattan Beach, CA

Skills

- Human Spaceflight
- Risk Assessment
- Risk management
- Reliability
- Safety
- System Design
- System Architecture
- System Integration
- System Requirements
- Systems Engineering
- Musician
- Musi

30 years at NASA (retired) and SpaceX. Innovating and exploring boundaries. 30 years experience in STEM outreach of every kind at every level from k-12, to college, to professional societies.

Frequently requested speaker on STEM via topics of Human Spaceflight, Sustainability, and Risk Management in US and abroad for educational events and conferences.

Conversational in French, Spanish, Russian.

Margaret H. Samuels

PhD student at the University of Rochester/Pathways Student Trainee in Electronic Parts and Packaging Branch at NASA Goddard Space Flight Center
Student Trainee/PhD student, NASA Goddard Space Flight Center
AL

Skills

- Electronic parts and packaging
- Molecular Beam Epiaxy
- Materials Science
- Thin film growth and characterization

Bio not added yet!

✔ Activity Stream
Industry Offered Virtual Chats

Chemistry in our Environment and in our Bodies

© 10/18/2016 9:00 AM Pacific Time
By Sureka Gattu, UT Southwestern Medical Center
Grade 6 To 8

Sign up for this Session
What Will you do Today?

Get Connected –
Inspire a student

OregonConnections.nepris.com
nepris.com
<table>
<thead>
<tr>
<th>Industry Partners</th>
<th>Community Partners</th>
<th>School Districts and ESDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autodesk</td>
<td>Business Education</td>
<td>Amity SD</td>
</tr>
<tr>
<td>Eaton</td>
<td>Compact</td>
<td>Canby SD</td>
</tr>
<tr>
<td>First Tech Credit Union</td>
<td>Evergreen Aviation and Space Museum</td>
<td>Central SD</td>
</tr>
<tr>
<td>FLIR Systems</td>
<td>Mad Science of Portland and Vancouver</td>
<td>Dallas SD</td>
</tr>
<tr>
<td>Garmin AT</td>
<td>MESA (Math Engineering Science Achievement)</td>
<td>Dayton SD</td>
</tr>
<tr>
<td>Intel</td>
<td>NASA Space Grant Consortium</td>
<td>Gladstone SD</td>
</tr>
<tr>
<td>Legacy Meridian Park Hospital</td>
<td>Oregon ASK (After School for Kids)</td>
<td>Lake Oswego SD</td>
</tr>
<tr>
<td>Mentor Graphics</td>
<td>Oregon FIRST</td>
<td>McMinnville SD</td>
</tr>
<tr>
<td>PGE Foundation</td>
<td>Project Lead The Way</td>
<td>Molalla River SD</td>
</tr>
<tr>
<td>Xerox</td>
<td>Salem-Keizer Education Foundation</td>
<td>Newberg SD</td>
</tr>
<tr>
<td></td>
<td>Saturday Academy</td>
<td>North Clackamas SD</td>
</tr>
<tr>
<td></td>
<td>Tualatin Chamber of Commerce</td>
<td>Oregon City SD</td>
</tr>
<tr>
<td></td>
<td>World of Speed</td>
<td>Salem-Keizer SD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Silver Falls SD</td>
</tr>
<tr>
<td>Community Colleges</td>
<td></td>
<td>Tigard-Tualatin SD</td>
</tr>
<tr>
<td>Chemeketa Comm College</td>
<td></td>
<td>West Linn-Wilsonville SD</td>
</tr>
<tr>
<td>Clackamas Comm College</td>
<td></td>
<td>Woodburn SD</td>
</tr>
<tr>
<td>Portland Comm College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oregon Tech</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>George Fox University</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>