Idaho Out-of-School Network

Think Make Create WORKS

TMC Works

STEM Ambassador Orientation

Idaho Out-of-School Network

Mission:

The Idaho Out-of-School Network's (ION) mission is to build, advocate for, and lead a strong out-of-school community. ION provides tools and resources to increase access to quality youth programs.

Vision:

Every Idaho child has an opportunity to learn and thrive through participation in a high quality out-of-school program.

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LABS

Idaho Out-of-School Network

University of Idaho Extension

Why is STEM important?

The State of America's Workforce

UNITED STATES

40%

of U.S. companies report difficulty in filling positions because of a lack of STEM skills.[1]

INTERNATIONAL

$2.5 Trillion

The U.S. would gain an extra $2.5 trillion in Gross Domestic Product between now and 2050 if its students scored at the international average on math and science tests.[2]

27%

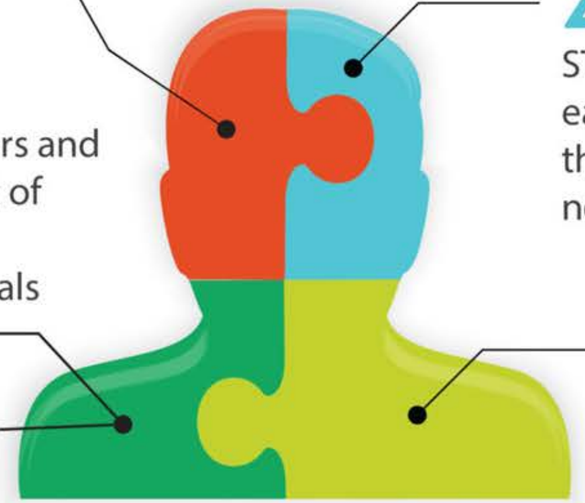
of the new high-skills jobs related to agriculture that will be created in the next five years will require a STEM education.[3]

86%

of engineers and 74 percent of computer professionals are men.[4]

21%

STEM employees earn 21% more than individuals in non-STEM fields.[5]



14%

of the engineering workforce is made up of women.[4]

10%

Underrepresented minorities hold only 10% of science and engineering jobs despite making up over a quarter of the U.S. population age 21 and older.[6]

Sources:

1. Brookings Institution, Still Searching: Job Vacancies and STEM Skills, 2014
2. Washington Center for Equitable Growth, January 2015
3. https://www.purdue.edu/usda/employment/wp-content/uploads/2015/04/2-Page-USDA-Employ.pdf
4. CTEq analysis of U.S. Census Bureau report on STEM college graduates, 2014
5. Brookings Institution, Still Searching: Job Vacancies and STEM Skills, 2014
6. National Science Foundation, Science & Engineering Indicators, 2013

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80%

For students in elementary through high school, **more than 80% of their time is spent learning outside of school** at afterschool and summer programs, in libraries, museums, science centers, or at home or in the community.

15%

Female scientists and engineers are concentrated in different occupations than are men, with relatively high shares of women in the social sciences (62%) and biological, agricultural, and environmental life sciences (48%) **and relatively low shares in engineering (15%)** and computer and mathematical sciences (25%).

3%

Women make up half of the total U.S. college-educated workforce, but less than one third of the science and engineering workforce. **Latinx and African-American women make up less than 3%.**

https://milliongirlsmoonshot.org/approach

STEM teaches "soft" skills

- A.k.a. durable or 21st century skills
- Employers have trouble filling jobs due to the "soft skills" gap
- Major in-demand skills of tomorrow are the Four C's:
  - Communication
  - Collaboration
  - Creativity
  - Critical thinking
- Youth learn widely-applicable problem-solving through inquiry.

Karimia, Haleh S., Piña, Anthony A. "Strategically Addressing the Soft Skills Gap Among STEM Undergraduates." *Journal of Research in STEM Education*, Vol 7, No 1, July 2021, 21-46. https://doi.org/10.51355/jstem.2021.99

Challenges to STEM Education

The following reasons were the same if STEM was offered in afterschool programs or not:

- ✓Do not have **funding** for STEM curriculum
- ✓Do not have qualified **staff**
- ✓Do not have **time** for a STEM program
- ✓Do not know of an appropriate STEM **curriculum**

Idaho Out-of-School Network Survey, June 2018

Jocelyn Cullers, Boise State University Institute for STEM & Diversity Initiatives

Idaho Out-of-School Network

connecting youth & communities

Idaho's TMC Leadership Team

Idaho Out-of-School Network
connecting youth & communities

Anna Almerico
Program Director

Wendy Wilson
STEM & Communications Coordinator

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TMC Labs Coordinator

University of Idaho Extension

Claire Sponseller
Area Extension Educator, 4-H STEM

IDAHO DEPARTMENT OF EDUCATION

Andrea Baerwald
Science & ISAS Coordinator

IDAHO BUSINESS FOR EDUCATION • SCIENCE • TECHNOLOGY • ENGINEERING • MATH
IDAHO ECOSYSTEM

Trisha Mick
Program Coordinator

The Coeur d'Alene Maker's Space
GIZMO cda

IDAHO STEM ACTION CENTER

Idaho Science Coaches

Idaho Department of Education
Science Coaches

TMC LABS

- TMC Leadership Team successfully launched the first 16 labs in May 2021.
- 28 TMC Labs on the road in 2023.
- More than 50,000 youth have used the labs so far.
- Each month, approximately 1,000 K-8 youth use TMC Labs.

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LABS

TMC Lab Locations

1. UI Extension 4-H Youth Development
2. UI Extension in Bingham County
3. Boys & Girls Clubs of Magic Valley
4. Treasure Valley Family YMCA
5. Nampa School District
6. Boys & Girls Club of Western Treasure Valley
7. Childrens Museum of the Magic Valley
8. UI Extension in Schitsu'umsh Reservation
9. Boys & Girls Clubs of Lewis-Clark Valley
10. UI Extension in Nez Perce Reservation
11. Gizmo
12. UI Extension in Lemhi County
13. East Bonner County Library District
14. Gooding Public Library
15. UI Extension in Boundary County
16. UI Extension in Bear Lake County
17. Boys & Girls Club of Ada County
18. Boys & Girls Club Ada County
19. Boys & Girls Clubs of Magic Valley
20. Pinehurst After School Solutions
21. United Way of Idaho Falls and Bonneville County
22. Boys & Girls Club of the Shoshone-Bannock Tribes
23. United Way of Southeastern Idaho
24. One Stone
25. Mountain View School District
26. Treasure Valley Family YMCA
27. Boys and Girls Club of Canyon County
28. Parma Learning Center

What is TMC Labs?

STEM Labs in trailers

What is TMC Labs?

STEM activities

What is TMC Labs?

Educator Training

TMC LABS

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GOAL 1

Bring hands-on STEM learning and skills to rural and underserved youth.

GOAL 2

Train educators to provide hands-on STEM learning to youth.

GOAL 3

Increase communities' support of STEM learning and support Idaho's workforce development.

WORKFORCE DEVELOPMENT TRAINING FUND:

Funding Source: Idaho WDC

Innovation Grants fund local workforce development projects, providing skills training and career connections to address employer-identified skill gaps and promote economic mobility, job creation, and innovation.

IDAHO WORKFORCE DEVELOPMENT COUNCIL

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GOAL 1

Support STEM programing at out-of-school time employers.

GOAL 2

Increase STEM job skills of 250 teenage and adult workers.

GOAL 3

Increase STEM-readiness of the overall Idaho workforce.

STEM AMBASSADORS WILL...

- 20 hours of training
- 80 placement hours
- Earn $750
- Learn STEM by teaching STEM to younger children
- Contribute to STEM program at your facility
- Develop workplace skills
- Explore future career options
- Optional: visit a STEM workplace
- Be able to enroll in apprenticeships (e.g. learning development professional)
- Optional: participate in the Youth Council

STEM Worksite/School Visit

Ambassadors will…

- Explore an area of interest
- See what a worksite looks like
- Learn steps for entering that workplace
- Meet people at the worksite

Do this by:

- Setting up a tour at a STEM employers
- Visit a STEM program at a higher-education institution
- Interview a STEM professional and learn about their career

Search for people

Micron

Search by location

Type and select a location

More filters · 1

Clear all filters

Users (3)

Show map:

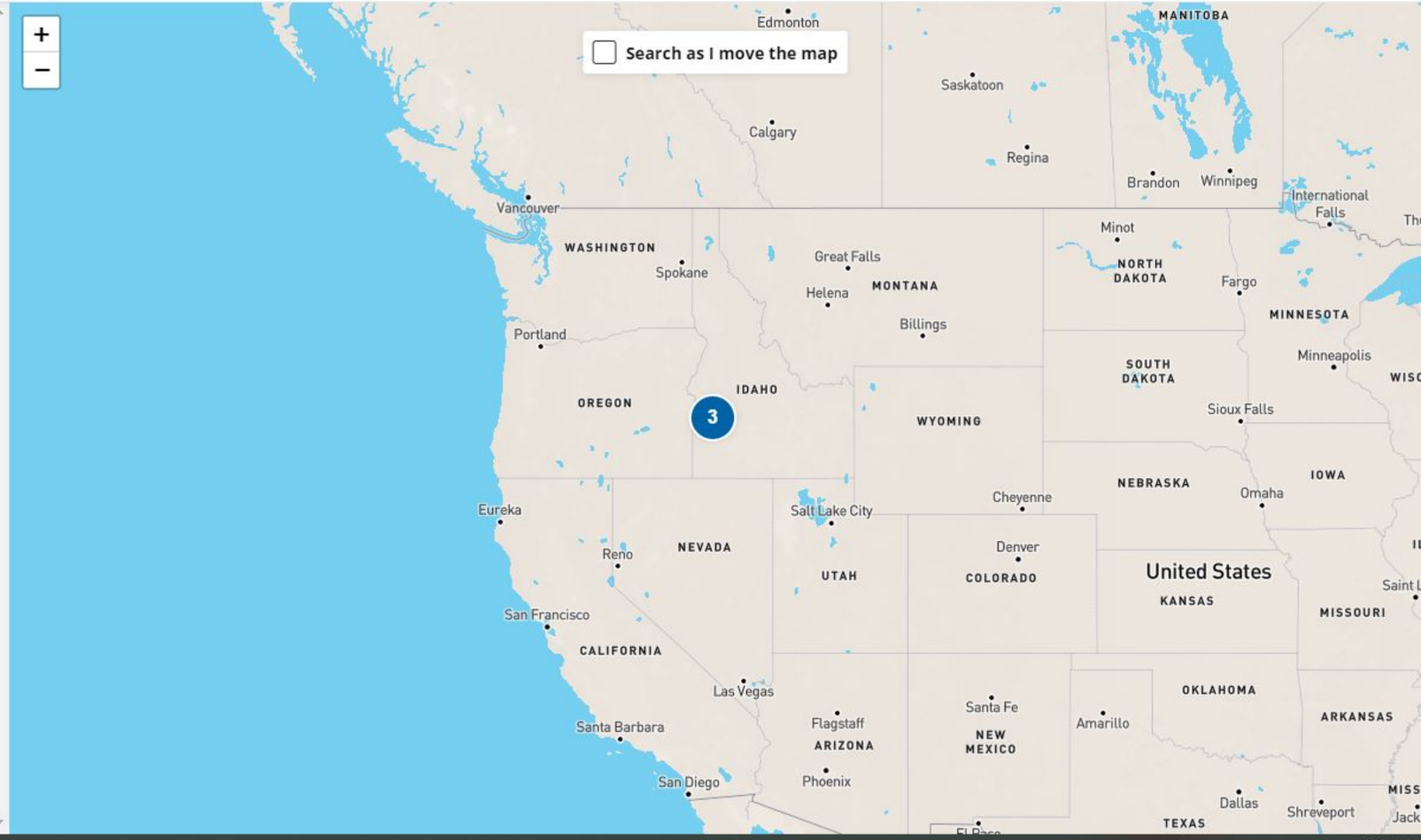
Sort by: Recently active

Maya Duratovic
Boise, ID, United States

Administrator at Boise State University in the Micron School of Materials Science an...

Raj Bansal
Eagle, ID, United States

Cathy Ammirati
Boise, ID, United States



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STEM Ambassador - *To Do List*

Earn
$750

1. **Submit Tax ID# to Site Administrator**
2. **Fill out the TMC Works Participant Registration Form at:**
   - **STEM Ambassador Training Step 1 OR**
   - **Top of ION's TMC Works webpage**
3. **Complete first 6 steps in Ambassador Training on ION's Learning Academy**
4. **Attend 3-hour live training with STEM Supervisor within first few weeks**

1. **Complete 80 placement hours: plan, prepare, lead STEM activities with children**
2. **Complete TMC User Reports after activities**
3. **Complete 20 hrs. STEM Ambassador Training**
4. **Optional:**
   - **STEM Activity Facilitation Reflection with STEM Supervisor**
   - **Visit a STEM workplace or higher-education program**
   - **Participate in the Youth Leadership Council**

1. **Finish submitting all reports**
2. **Complete end-of-program surveys**
3. **Receive stipend**

PROGRAM START → **COHORT DURATION** → **END OF COHORT**

Summer 2024: 6/15	**June - August**	**8/31/24**
Fall 2024: 9/1	**September - December**	**12/25/24**
Spring 2025: 1/1	**January - May**	**5/31/25**
Summer 2025: 5/15	**May - August**	**8/25/25**
Fall 2025: 9/1	**September - December**	**12/25/25**

STEM Supervisor - *To Do List*

Earn $750

1. Provide Tax ID# to Administrator
2. Complete 1 hour Orientation (online meeting or in ION's Learning Academy)
3. Fill out TMC Works Participant Registration Form (part of orientation)
4. Attend 4-hour STEM Supervisor in-person training session
5. Lead 3-hour live training with STEM Ambassadors within first few weeks

1. Schedule & manage STEM sessions
2. Help STEM Ambassadors plan and prepare activities
3. Supervise STEM sessions
4. Coordinate and coach STEM Ambassadors
5. Ensure completion of User Reports
6. Buy STEM materials for Ambassadors and submit receipts to Site Administrator
7. Complete additional 15 training hours
8. Complete 80 placement hours

1. Finish submitting all reports
2. Complete end-of-program surveys
3. Receive stipend

PROGRAM START → **COHORT DURATION** → **END OF COHORT**

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Site Administrator - *To Do List*

PROGRAM START

1. Attend Administrator Orientation - or view recording on Learning Academy *only once*
2. Recruit STEM Supervisors
3. Submit STEM Supervisors Tax ID #s. See instructions at ION's TMC Works website
4. Coordinate STEM Supervisor Training with Amy, assign them Orientation
5. Ensure all Supervisors fill out TMC Works Participant Registration Form

COHORT DURATION

1. Track hours for STEM Supervisors and Ambassadors
2. Buy STEM materials/ track receipts with Receipt Ledger form
3. Upload additional Tax ID #s as they come in
4. Check-in meeting with ION

END OF COHORT

1. Submit STEM Ambassador Tax ID #s once they have completed 100 hours
2. Administer stipends and submit business ledger
3. Submit Invoice Report Form
4. Participate in ION post-program evaluation

TIMELINE

COHORT		
Summer 2024: 6/15	June - August	8/31/24
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Summer 2025: 5/15	May - August	8/25/25
Fall 2025: 9/1	September - December	12/25/25

Next Steps:

- Complete the first 6 steps of STEM Ambassador Training
- Submit your Tax ID number to your site administrator
- Schedule the 3-hour live training with your STEM Supervisor

Amy Post

TMC Labs Coordinator

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Idaho Out-of-School Network

connecting youth & communities

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Thank You