STEM and Idaho’s Economy

In 2019, 7,633 STEM jobs were unfilled in Idaho, resulting in nearly $516 Million of unclaimed personal income.

If these STEM jobs were filled, state tax revenues would increase by over $27 Million.

Idaho’s STEM jobs pay double the median wage of non-STEM jobs.

Source: Idaho Department of Labor
2019 (actual)*
7,633 unfilled STEM jobs
~$27.2 million in lost tax revenue
~$516 million in lost personal income

2026 (projected**)
~105,000 total STEM jobs
~$373 million in potential tax revenue
~$7 billion in potential personal income

STEM AC
Computer Science Impact

% Change
Secondary Students Taking CS: 18%
Secondary Teachers Teaching CS: 11%
School Year 17-18 School Year 18-19

~61% of STEM AC's budget already supports rural communities, educators, and students

Unfilled Idaho STEM jobs and Projections
3813 in 2016 5949 in 2017 6326 in 2018 7633 in 2019 2026

Idaho Department of Labor/Idaho STEM Action Center
802 W. Bannock St., Ste. 900 Boise, ID 83702
208.332.1729 | Angela.Hemingway@stem.idaho.gov
21st Century Skill Development
Idaho STEM Statutes

- Idaho Code 67-823: STEM Action Center
- Idaho Code 33-1633: Computer Science Initiative
- Idaho Code 67-824: STEM Education Fund
- Idaho Code 33-4701: STEM School Designation
- Idaho Code 33-523: STEM Diploma
- Idaho Code 33-1634: Computer Science for All
- Idaho Code 63-3029A: STEM AC as an Idaho Education Tax Credit
STEM Action Center Board

Dr. Dave Hill / Chair
State Board of Education Member

Dee Mooney / Vice Chair
Executive Director, Micron Foundation

Tim McMurtrey
Deputy Superintendent of Operations, State Department of Education

Dee Mooney / Vice Chair
Executive Director, Micron Foundation

Jennifer Jackson
Public Affairs and Strategic Initiatives, Idaho National Laboratory

Jeff Rosser
Director of Continuous Improvement, Hecla Mining

Jake Reynolds
Business Development & Operations Administrator, Idaho Department of Commerce

Wendi Secrist
Director, Idaho Department of Labor

Paul Casey
Director Research and Development, Chobani
A diverse, equitable, thriving ecosystem for a prosperous, STEM-literate Idaho

Engineering innovative opportunities for educators, students, communities, and industry to build a competitive Idaho workforce and economy through STEM and computer science education.
STEM AC Strategic Goals

1. Advance equitable **access** to high-quality STEM+CS opportunities for educators, students, and communities

2. **Align** education and workforce needs throughout Idaho

3. Increase **awareness** of the importance of STEM throughout Idaho
As Legislated in Idaho Code (§67-823, §33-1633, §33-4701, §33-1634, and §33-523)

• Support high-quality STEM and CS professional development for educators
• Distribute grants to students, educators, and communities
• Engage industry to support STEM/CS educational outcomes
• Support student STEM and CS competitions
• Serve as a resource center for instructional materials and best practices
• Identify and recognize high-quality STEM Schools
• Increase awareness of Idaho’s STEM Diploma
• Work well with other agencies and partners!
White House STEM Strategic Plan
Dec. 2018 - 2023

Goals:
• Build strong foundations for STEM literacy
• Increase diversity, equity, and inclusion in STEM
• Prepare the STEM workforce for the future

Pathways:
• Develop and enrich strategic partnerships
• Engage students where disciplines converge
• Build computational literacy
65 STEM Ecosystem Stakeholders

- **Higher Education**: BSU, UI, ISU, CWI, CSI, CEI, NIC
- **K12 Education**: Superintendent, Principal, Teacher, Coach
- **Partners in Equity**: Tribal and Hispanic Education
- **Out-of-School Educators**: libraries, museums, makerspace, afterschool programs, early learning
- **Industry Partners**: Micron, INL, Chobani, Hecla, ITC, IBE, St. Luke’s, SEL, Vynyl
- **State Agency Partners**: OSBE, SDE, CTE, WDC, IPTV, ICfL, ICfA, ISHS, IDLA, Military, Dept. of Commerce
- **Legislators and the Governor’s Office**
Intended Ecosystem Meeting Outcomes

• Developed a **shared understanding** of the importance of the STEM ecosystem approach

• Crafted shared **aspirations, priorities, and indicators of success** for Idaho STEM Ecosystem

• Identified of **constraints** that stand in the way of success

• Developed an outline of **action plan** for Idaho, including identification of work groups, general governance structure, and timeline
FY20 Appropriation: $5,668,400

- $2,106,000 Spending Authority
- $2,562,400 Cash

DEDICATED FUNDS

Cash: $3,562,400

FY21 Recommendation: $6,149,700

- $3,102,600 Spending Authority (without cash)
- $3,047,100 Cash

DEDICATED FUNDS

GENERAL FUND

Cash: $3,047,100
## Budget Analysis by Goal (FY19 & FY20)

<table>
<thead>
<tr>
<th>Goal</th>
<th>FY19 – Actual</th>
<th>FY20 – Proposed (July 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOAL 1 ACCESS: STEM+CS Grants</strong></td>
<td>12%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>GOAL 1 ACCESS: STEM+CS Professional Development</strong></td>
<td>26%</td>
<td>27%</td>
</tr>
<tr>
<td><strong>GOAL 2 ALIGNMENT: Competitions, Externships, Partnerships, Sponsorships, Mentorships, STEM Schools, Research</strong></td>
<td>42%</td>
<td>45%</td>
</tr>
<tr>
<td><strong>GOAL 3 AWARENESS: Outreach/Awareness Activities</strong></td>
<td>5%</td>
<td>11%</td>
</tr>
<tr>
<td>Operating Expenses (rent, office, IT, supplies, software, contracts, travel, conferences)</td>
<td>14%</td>
<td>9%</td>
</tr>
</tbody>
</table>
Our Opportunities – STEM.Idaho.gov/apply

- **Goal 1: Equitable access**
  High-quality Professional Development
  - i-STEM
  - STEM Leadership Training

- **Goal 2: Align education and workforce**
  - Teacher Externships

- **Goal 3: Increase Awareness**
  - Invite to upcoming STEM events
Goal 1 **Access:** ($1.2M, 27% budget)

- **i-STEM Summer Institutes** in six regions with SDE and industry
  - Cost: $500,000
  - Partnerships: $158,000

- **STEM Leadership Training** with OSBE
  - Cost: $120,000
  - Partnerships: $100,000
Goal 2: **Align** STEM education and workforce

**Teacher Externships**

- Teachers worked 5 weeks in Idaho businesses
- Total Cost = $80,000
- WDC Grant = $55,000
- Idaho Power = $2,500
- At least 27 businesses asking for externs for summer 2020
STEM Designated School (§33-4701)  
2019 – 2023  
Cost: $40,000

- Barbara Morgan STEM Academy, K-5, West Ada
- Bingham Academy, 9-12, Blackfoot
- Galileo STEM Academy, K-8, West Ada
- Temple View Elementary, PK-6, Idaho Falls
Current Applicants for Designation 2020 - 2024

- Southside Elementary, K-6, Lake Pend Oreille District
- N. Idaho STEM Charter Academy, K-12, Rathdrum

STEM Diploma (§33-523)
Goal 2: **Align STEM education and workforce**

**Student Competitions**

(Cost: $120,000 + $136,000 industry)

- State and National Competition Travel
- Regional Idaho Science and Engineering Fairs
- IDX – 3D Fabrication Middle School Competition
- Robotics: FIRST, VEX, Botball
- Congressional App Challenge
- MakerMinded
- eCybermission
- Invent Idaho
- Future Cities
- Science Olympiad
- Science Bowl
## GOAL 2: Align STEM education & workforce

<table>
<thead>
<tr>
<th>Funds Raised in FY20</th>
<th>$965,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Idaho National Laboratory</td>
<td>$113,000</td>
</tr>
<tr>
<td>• Micron Technology Foundation</td>
<td>$112,000</td>
</tr>
<tr>
<td>• Battelle</td>
<td>$63,000</td>
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<tr>
<td>• JR Simplot Company Foundation</td>
<td>$50,000</td>
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<tr>
<td>• Laura Moore Cunningham Foundation</td>
<td>$50,000</td>
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<tr>
<td>• Dutch Bros.</td>
<td>$32,000</td>
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<tr>
<td>• Citizen Schools</td>
<td>$26,000</td>
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<tr>
<td>• Power Foundation</td>
<td>$26,000</td>
</tr>
<tr>
<td>• J.A. &amp; Kathryn Albertson Foundation</td>
<td>$25,000</td>
</tr>
</tbody>
</table>
Total In-Kind Donations, FY20

$1.65M

Includes grant reviewers, competition judges, training room space, mentors, industry partnerships, and media coverage
2nd in the Nation in Computer Science!

- Idaho offers **CS to preservice teachers**.
- Idaho requires all secondary schools **offer CS (§33-1634)**.
- Idaho allows CS to **count as a graduation requirement**.
- Idaho allows CS to **count as an admission requirement** at higher education.

- Idaho has a **state plan** and K-12 **CS standards**.
- Idaho has allocated **PD funding**.
- Idaho has **certification pathways** for teachers.
- Idaho has a **CS position**.
STEM Resources Portal through IDLA

https://resources.stem.idaho.gov/
What We Know

**Students**
- 83% want to study STEM in post-secondary
- 95% say STEM is fun!

**Parents**
- 92% believe their community should invest more in STEM
- 99% would like their child to pursue a STEM career
- 98% want their child to have access to a mentor
Mentorship Platform through IDLA

One of the most powerful tools for retention of students in STEM is having a **strong mentor**!

Available NOW!
Populated with 500 teachers and 150 mentors

[https://mentorship.stem.idaho.gov/](https://mentorship.stem.idaho.gov/)
# GOAL 3: Increase awareness of the importance of STEM

## Strategic Plan

<table>
<thead>
<tr>
<th>Performance Report Metrics</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagements</td>
<td>10,428</td>
<td>204,000</td>
<td>406,239</td>
<td>442,318</td>
</tr>
<tr>
<td>Educators Interactions</td>
<td>1,200</td>
<td>4,800</td>
<td>12,633</td>
<td>35,768</td>
</tr>
<tr>
<td>Community STEM Events</td>
<td>45</td>
<td>140</td>
<td>143</td>
<td>288</td>
</tr>
<tr>
<td>Cash</td>
<td>$72,000</td>
<td>$205,000</td>
<td>$750,500</td>
<td>$1,346,800</td>
</tr>
<tr>
<td>In-Kind Donations</td>
<td>Did not track</td>
<td>$662,000</td>
<td>$1,787,400</td>
<td>$4,446,500</td>
</tr>
</tbody>
</table>

Data Map Link
Goal 3: Increase Awareness:
Upcoming STEM AC Events

ISEF (3 Regions)
BSU
Mar. 6, 2020

FIRST Robotics
Ford Idaho Center
Mar. 26-28, 2020

STEM on the Blue
April 24, 2020
Contact Information

Dr. Angela Hemingway
- Executive Director
- STEM Action Center
- Executive Office of the Governor

Phone: 208-332-1726

Email: Angela.Hemingway@STEM.Idaho.gov