STEM and CS Legislation
(Idaho Code §67-823 and §33-1633)

- Work with the State Board, SDE, industry, educators, and universities to create Idaho-specific K-12 computer science standards
- Support high-quality STEM and CS professional development for educators
- Distribute grants to students, educators, communities, and the workforce
- Serve as a resource center for instructional materials and best practices
- Engage industry to support STEM/CS education outcomes
- Support student STEM and CS competitions
- Support STEM and CS pilot projects
- Support traditionally underrepresented population in STEM and CS
Strategic Plan and Agency Goals

• **GOAL #1**: Coordinate & facilitate implementation of STEM programs throughout Idaho

• **GOAL #2**: Align education and workforce needs throughout Idaho

• **GOAL #3**: Increase awareness of STEM throughout Idaho
Our Impact

- **Student:** “My favorite part was that it was challenging, but at the same time kind of easy. It was really fun even if you failed, because you got to know what you needed to do correctly.”

- **Educator:** "The experience using the robots was an overwhelming success. Most importantly, numerous students saw themselves as scientists as they explored the kits, designed their own challenges and courses, and worked in teams to problem solve."

88% of Idaho parents believe that their school should invest more in STEM education.

The STEM Action Center funded approximately 50% of incoming requests due to current budget limitations.

STEM Action Center efforts have impacted nearly 60,000 students and educators since opening in 2015.
Public Private Partnership – Tesoro Community Robotics Kits

- **Tesoro** – Provided $50,000 in monetary support
- **ICfL** – Provided $5,737 monetary, ran the grant and will provide the training to 45 libraries ($55,000 total)
- **STEM AC** – Developed idea, wrote grant ($35,000)
- **STEMfinity** – Kit assembly and packaging ($5,000)
- **RESULT**: 45 libraries throughout Idaho will receive 30 robotics kits each plus training. They will then check these out to classrooms and use at family STEM events
- **TOTAL VALUE**: ~$145,737 for a cost of $35,000 (76% covered with external funds)
Public Private Partnership – Wonder Media Story Maker

- **Wonder Media** – Provided $69,000 (hardware, software, and training to six Idaho schools)

- **KBOI2** – Provided media coverage including airing of PSA created by students at Wilder Elementary ($28,875)

- **STEM AC** – Accepted competitive proposals and invested $50,000 to support school hardware and development of training and curriculum

- **RESULT**: 6 schools will receive the complete Wonder Media Story Maker package, training, and curriculum (developed by Wilder educators)

- **TOTAL VALUE**: ~$147,000 for a cost of $50,000 (67% covered with external funds)
Public Private Partnership – Regional Science and Engineering Fairs

- **Estimate Cost:** ~$100,000 per region, including educator training plus materials and travel grants for students
- **Supporters:** BSU, ISU, UI, Micron, INL, KBOI2, IPTV, Verizon, Fluor, Discovery Center of Idaho ($125,000)
- **In-Kind** – Judges, mentors, volunteers ($15,000)
- **STEM AC** – Developed competitive applications, vetted student projects, ran each fair including judging, volunteers, and awards
- **RESULT:** 235 projects were submitted and four will advance to the international competition
- **TOTAL VALUE:** ~$300,000 with ~$150,000 covered (50% covered with external funds)
STEM Matters 2017
STEM Day at the Fair 2016

Idaho Day of Design
Teacher trainings & student competition

White House Kids’ Science Advisor meeting
**IMPACT MAP – Interactive!**

**Impact data map** contains funding opportunities and legislative districts for FY16 and FY17

STEM.Idaho.gov and select “Our Impact”
Facts about Idaho Jobs

16 of the 20 FASTEST GROWING careers in Idaho require STEM SKILLS.

Idaho’s tech sector is the second fastest growing in the nation at 6.3%.

In Idaho, STEM JOBS are expected to grow 23% by 2024.

Within 20 years, 80% OF JOBS will require skills in TECHNOLOGY.
Unclaimed STEM Labor Wages in Idaho, 2016

- Median STEM Wage: $30/hr
- 3,818 STEM Jobs Unfilled
- Unclaimed Labor Wages Annually: $240M
- Lost in Idaho state tax receipts: $14M

Source: Idaho Dept. of Labor, 2016
## 2016 Idaho AP Test Taking by Gender

<table>
<thead>
<tr>
<th></th>
<th>Calculus AB</th>
<th>Calculus AB % Boys/Girls</th>
<th>Computer Science A</th>
<th>Computer Science A % Boys/Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td>876</td>
<td>--</td>
<td>54</td>
<td>--</td>
</tr>
<tr>
<td><strong>MALES</strong></td>
<td>450</td>
<td>51%</td>
<td>42</td>
<td>78%</td>
</tr>
<tr>
<td><strong>FEMALES</strong></td>
<td>420</td>
<td>49%</td>
<td>12</td>
<td>22%</td>
</tr>
</tbody>
</table>

*Source: Idaho State Board of Education*
New funding sources: ESSA and STEM

ESSA puts a greater emphasis on ensuring a well-rounded education and ensuring equity.

ESSA recognizes that:

• High-quality STEM education opportunities are essential to achieving both these goals
• STEM learning opportunities and support for STEM teachers is very important
• States need flexibility to set new policy and funding priorities, and they can do that to support STEM learning
FY18 Legislation

Coming Soon...STEM School Designation

- No new appropriation
- Would use STEM AC funds
Monetary and In-Kind Support - $575,000 Thus Far

• **Monetary Donations**
  – $125K thus far (received and “in the mail”)

• **Cash Equivalent and In-Kind Support**
  – ~$375,000 in FY17

• **Grants**
  – Not all grants run through the Center. We have helped secure 60K in grants thus far.

• **Need for 501c3/Foundation Status**
FY17 GENERAL FUND
$4,420,700

$1.5 million Ongoing
$420,700 Office
$500,000 One-Time

- Computer Science Initiative
- Up to $2 million

FY18 RECOMMENDATION
$4,489,500

$2 million Ongoing
$489,500 Office

- Industry Grants
- Up to $2 million

GENERAL FUND (§67-823)

STEM EDUCATION FUND

STEM EDUCATION FUND

GENERAL FUND
We will shift our focus over time
Contact Information

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

Website: STEM.Idaho.gov
Phone: 208-332-1726
Email: Angela.Hemingway@STEM.Idaho.gov
MISSION

Connecting STEM education and industry to ensure Idaho’s long-term economic prosperity.

VISION

Produce a STEM competitive workforce by implementing Idaho’s K-Career STEM education programs aligned with industry needs.
How do our awareness efforts compare to other states?

<table>
<thead>
<tr>
<th>Year Created</th>
<th>Avg. Monthly Web Visitors</th>
<th>Newsletter Subscribers</th>
<th>Facebook “Likes”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1,900 Idaho Visitors</td>
<td>4,400 Idaho Subscribers</td>
<td>782 “Likes”</td>
</tr>
<tr>
<td></td>
<td>(since July website revamp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>1,600 Utah Visitors</td>
<td>3,300 Utah Subscribers</td>
<td>1,220 “Likes”</td>
</tr>
<tr>
<td>2012</td>
<td>N/A - unavailable for Iowa</td>
<td>3,130 Iowa Subscribers</td>
<td>8824 “Likes”</td>
</tr>
</tbody>
</table>
Percentage of Women and Men in ALL Jobs vs STEM Jobs, 2009

Source: ESA calculations from American Community Survey public-use microdata
Idaho Teachers Need Resources –

8th Grade Idaho Science Teachers who say they have all or most of the resources that they need

How can you get involved?

• Consider:
  – Becoming a **mentor** for a student project
  – Acting as a **judge** at a competition, or
  – **Volunteering** at one of our STEM events
  – **Visit** one of our STEM events

• **VISIT**: STEM.Idaho.gov, “**Partner with Us**” Page