



IDAHO
STEM
ACTION CENTER



February 14, 2017

Angela Hemingway
Executive Director

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."*

STEM
Action Center efforts
have impacted
**NEARLY 60,000 STUDENTS
AND EDUCATORS** since
opening in 2015.

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.



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)

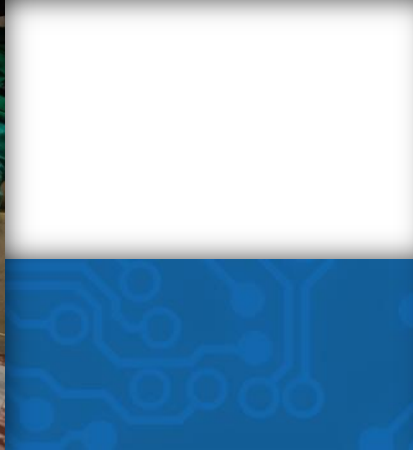
Public Private Partnership – Regional Science and Engineering Fairs

- **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



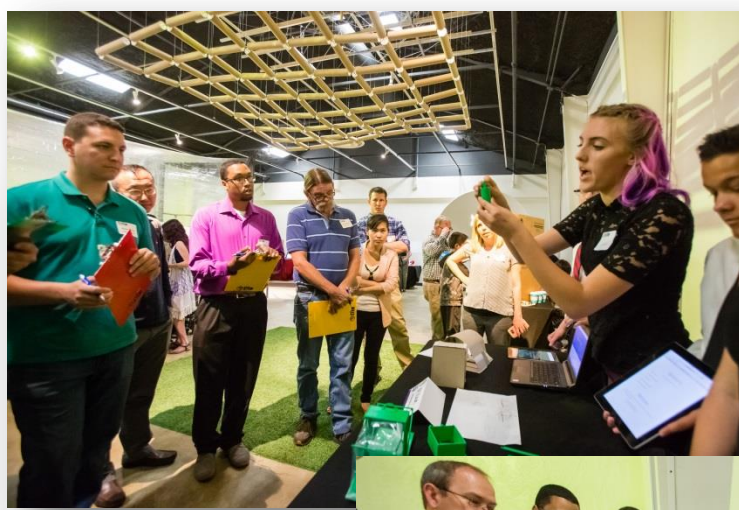
Idaho Day of Design



STEM Day at the Fair 2016



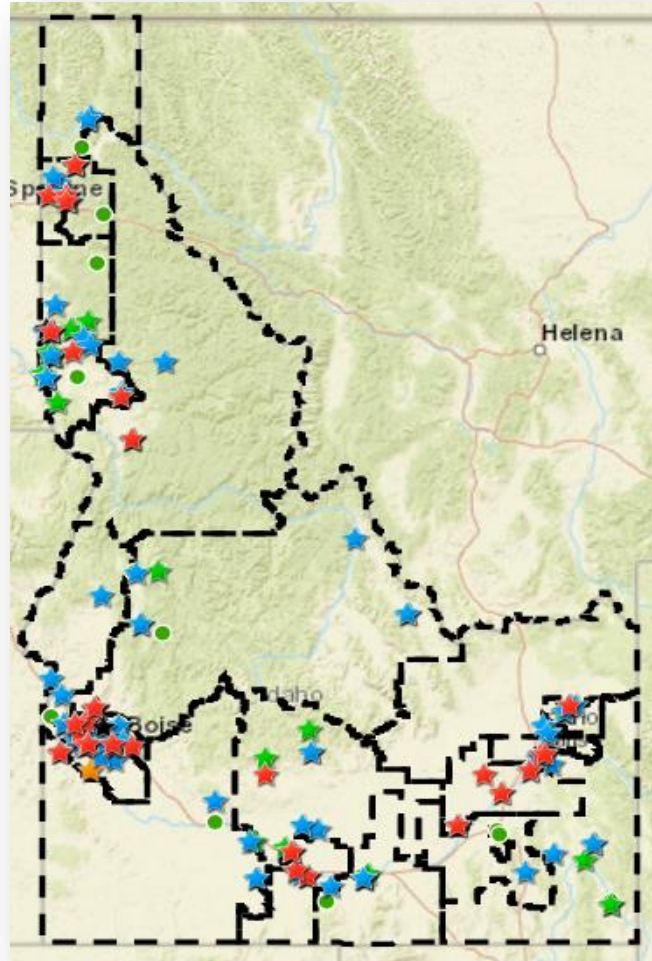
Teacher trainings & student competition



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

\$240M
Unclaimed Labor
Wages Annually

\$14M
Lost in Idaho state
tax receipts

Source: Idaho Dept. of Labor, 2016

2016 Idaho AP Test Taking by Gender Calculus AB and Computer Sci A	CALCULUS AB	CALC AB % Boys/Girls	COMPUTER SCIENCE A	CS A % Boys/Girls
TOTAL	876	--	54	--
MALES	450	51%	42	78%
FEMALES	420	49%	12	22%

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

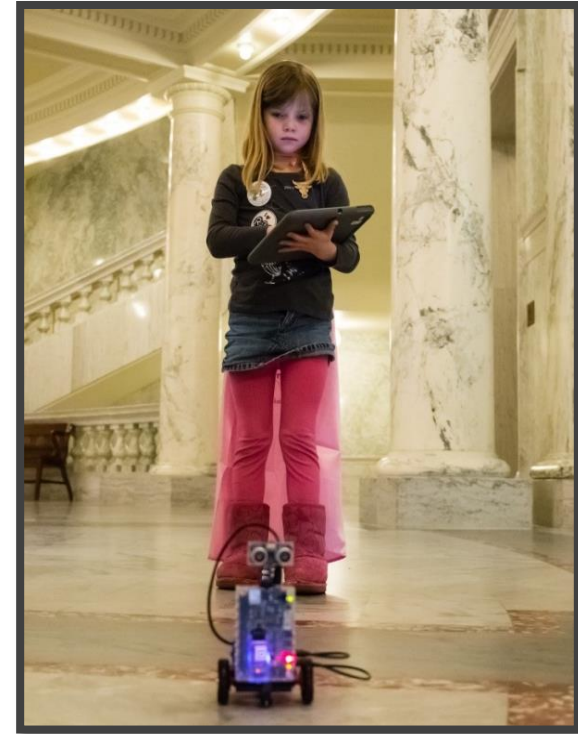
Coming Soon...STEM School Designation

- No new appropriation
- Would use STEM AC funds



Monetary and In-Kind Support - \$575,000 Thus Far

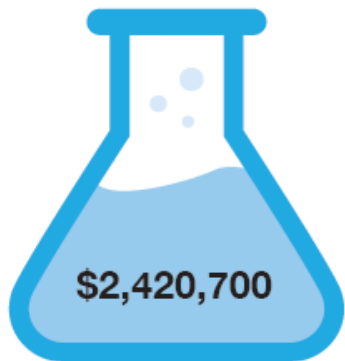
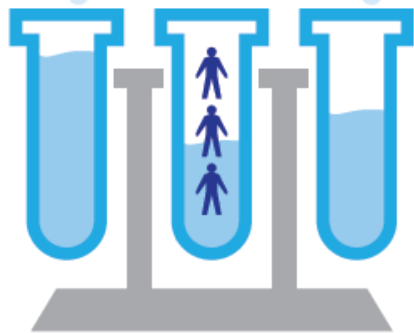
- **Monetary Donations**
 - \$125K thus far (received and “in the mail”)
- **Cash Equivalent and In-Kind Support**
 - ~\$375,000 in FY17
- **Grants**
 - Not all grants run through the Center. We have helped secure 60K in grants thus far.
- **Need for 501c3/Foundation Status**



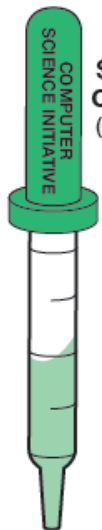
FY17 GENERAL FUND

\$4,420,700

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



GENERAL FUND (§67-823)



**\$2million
One-Time
(\$33-1633)**

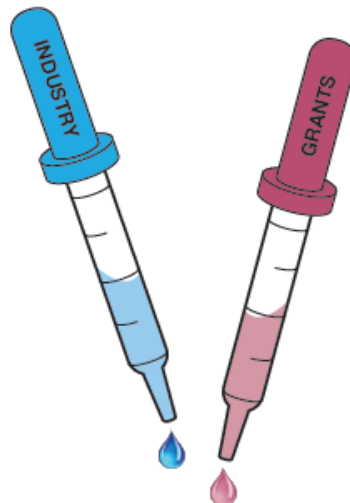
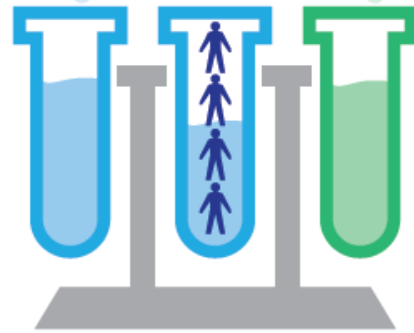


STEM EDUCATION FUND

FY18 RECOMMENDATION

\$4,489,500

\$2million Ongoing (§67-823) Office \$489,500 \$2million Ongoing (§33-1633)



Up to
**\$2million
Spending
Authority**



STEM EDUCATION FUND



GENERAL FUND

We will shift our focus over time



Contact Information

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- Executive Office of
the Governor

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Supplemental Information



STEM Action Center Board



Dr. Dave Hill / Chair

State Board of
Education member



Dee Mooney / Vice Chair

Executive Director,
Micron Foundation



Kenneth Edmunds

Director, Idaho
Department of Labor



Dr. Mark Peters

Director, Idaho
National Laboratory



Dr. Lorna Finman

CEO,
LCF Enterprises



Megan Ronk

Director, Idaho
Department of Commerce



Tim McMurtrey

Deputy Superintendent
of Operations,
State Department of
Education



Von Hansen

CEO,
AlertSense Inc.

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.

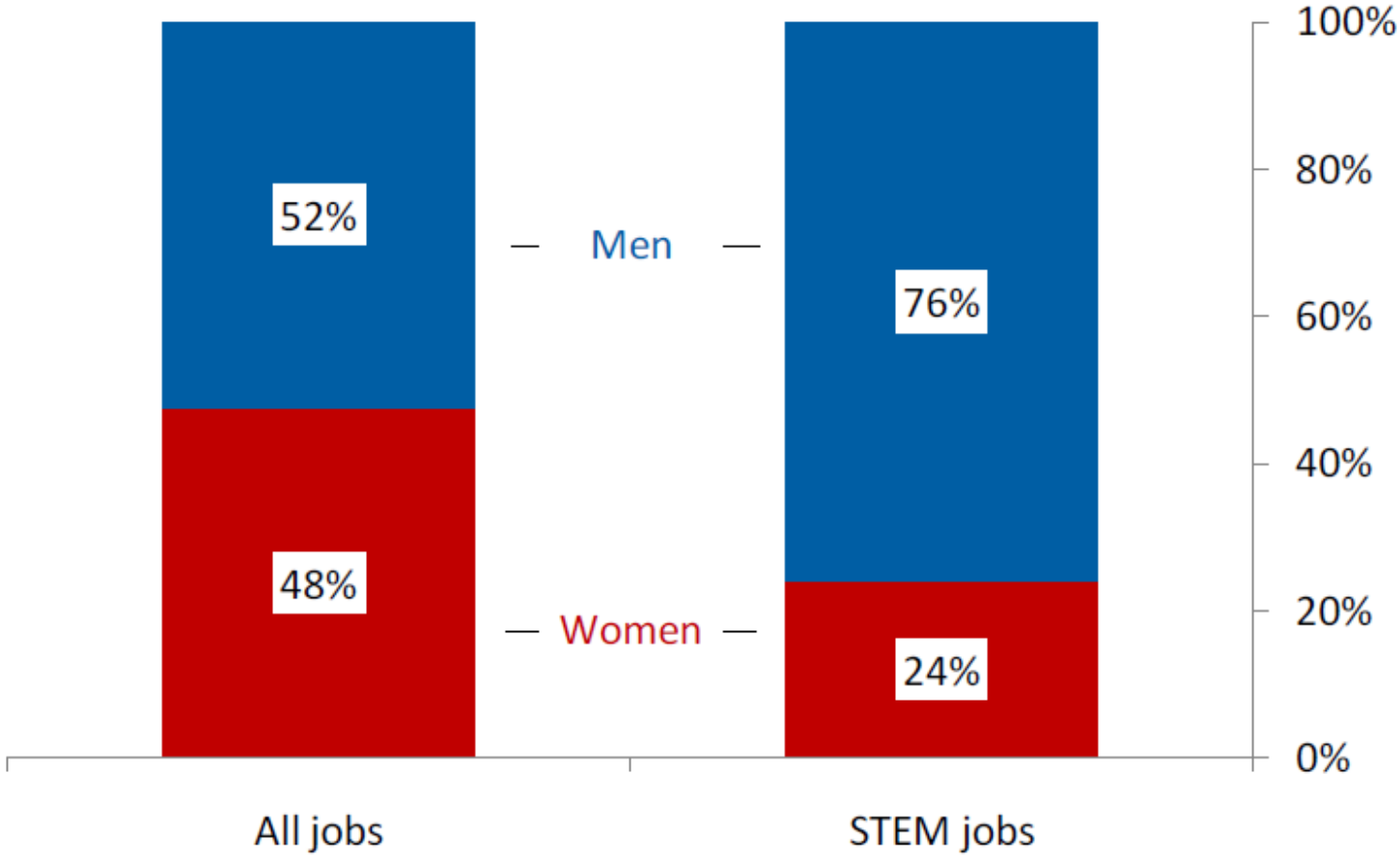


How do our awareness efforts compare to other states?

Year Created:	Avg. Monthly Web Visitors:	Newsletter Subscribers:	Facebook "Likes":
2015	1,900 Idaho Visitors <i>(since July website revamp)</i>	4,400 Idaho Subscribers	782 "Likes"
2013	1,600 Utah Visitors	3,300 Utah Subscribers	1,220 "Likes"
2012	N/A - unavailable for Iowa	3,130 Iowa Subscribers	8824 "Likes"



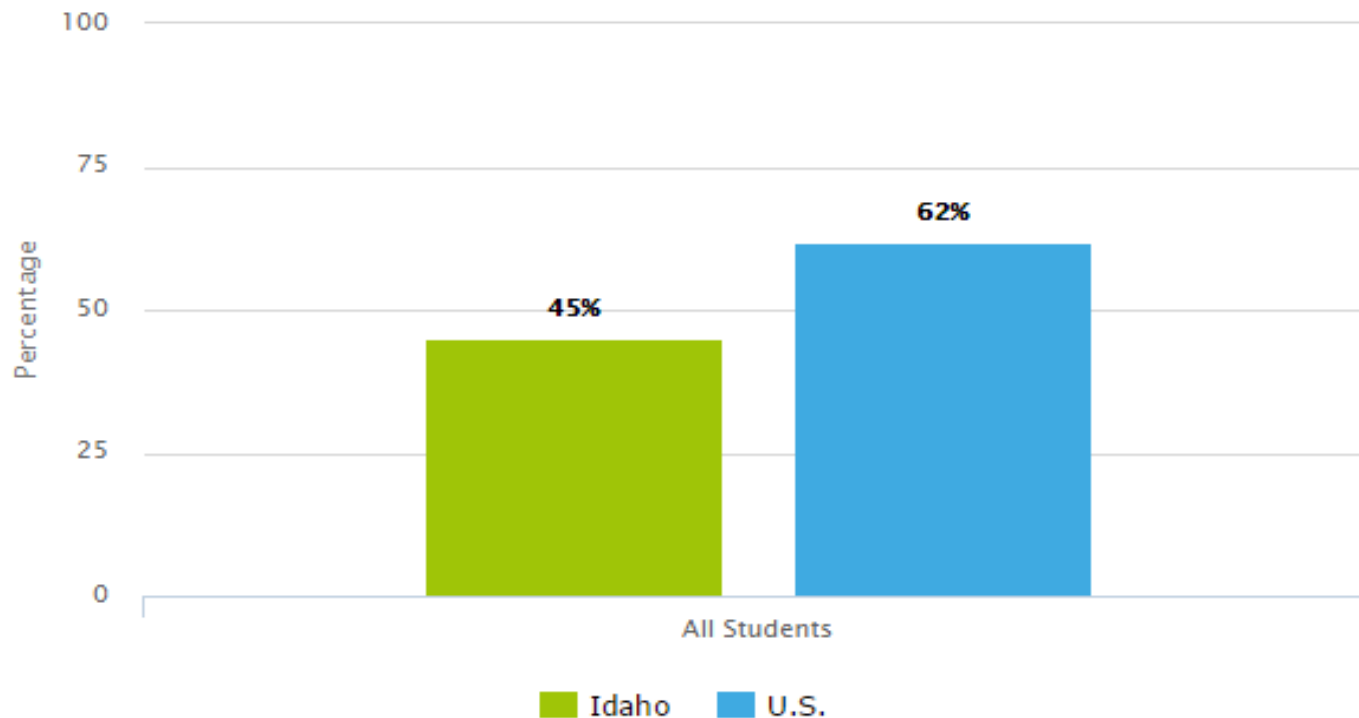
Percentage of Women and Men in ALL Jobs vs STEM Jobs, 2009



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



Source: U.S. Dept of Education, 2015

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

