Attachment 1

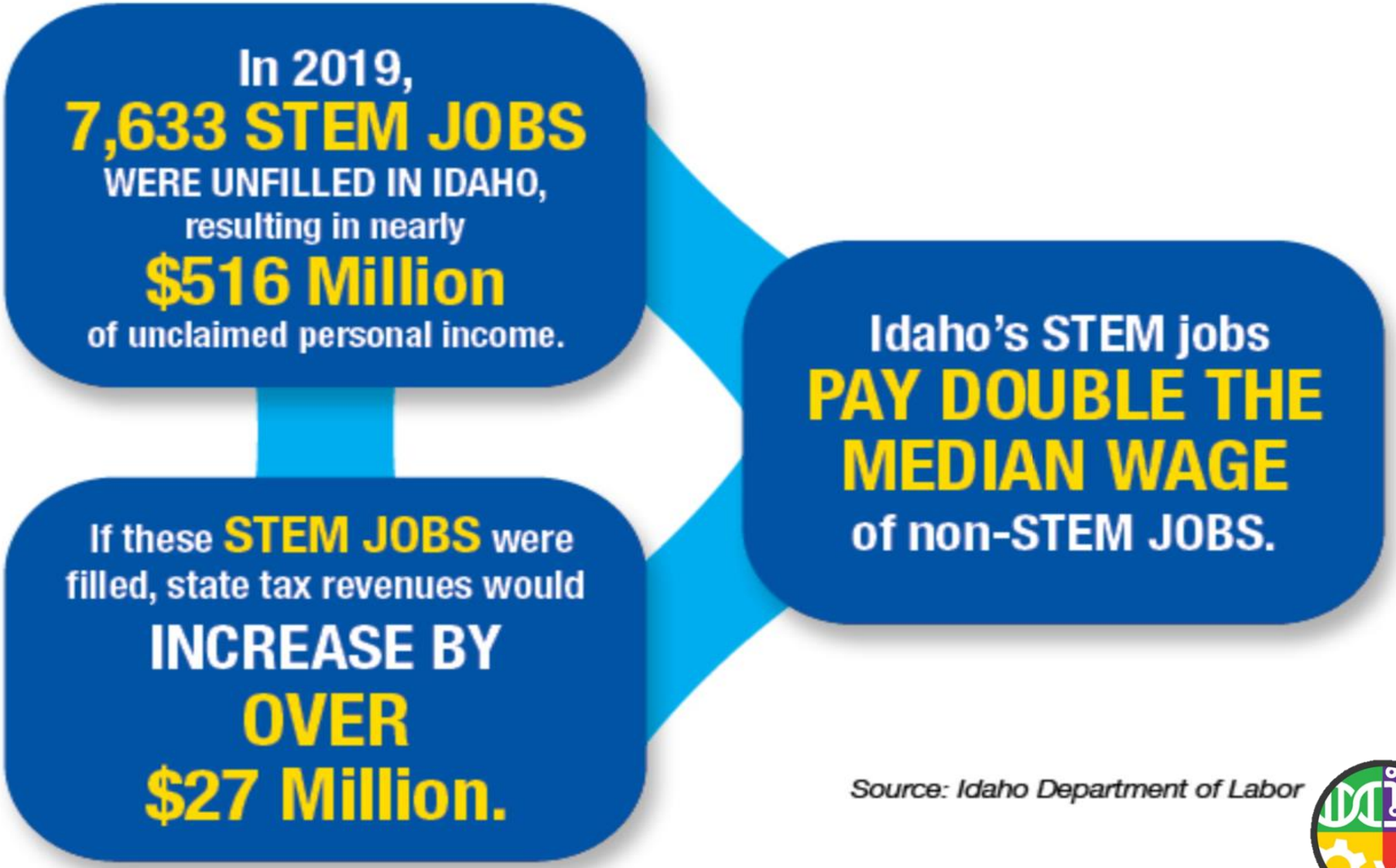
IDAHO STEM ACTION CENTER

Senate Education Committee Presentation

Dr. Angela Hemingway

January 21, 2020

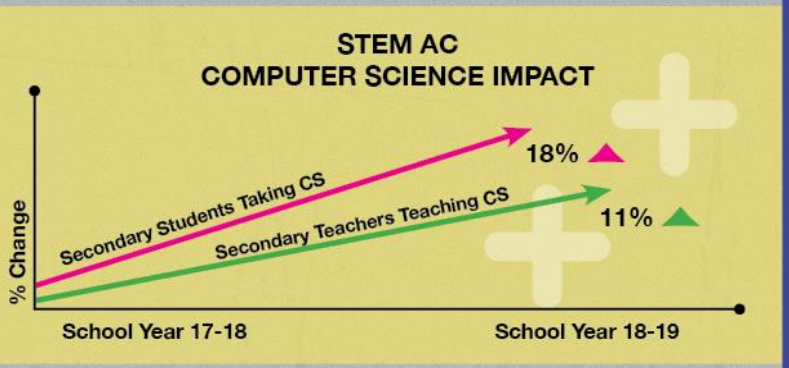
STEM and Idaho's Economy

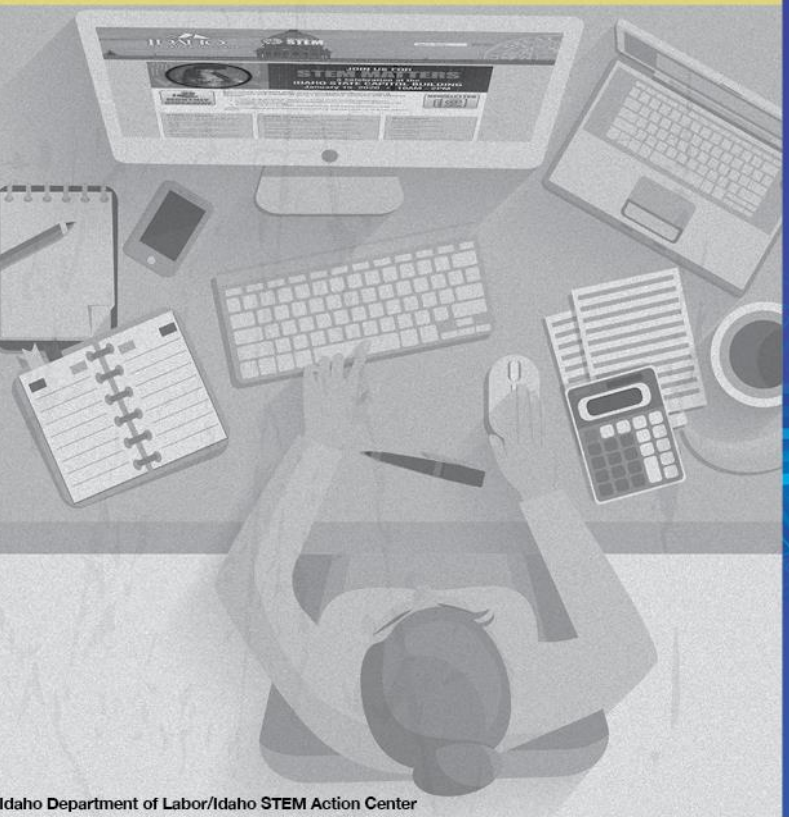


Source: Idaho Department of Labor

2019 *(actual)**

7,633 unfilled STEM jobs
~$27.2 million in lost tax revenue
~$516 million in lost personal income



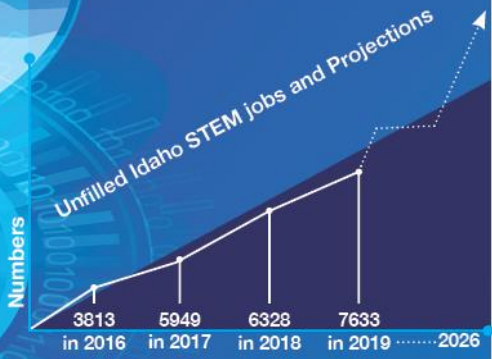


Idaho Department of Labor/Idaho STEM Action Center

2026 *(projected*)*

~105,000 total STEM jobs
~$373 million in potential tax revenue
~$7 billion in potential personal income

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



IDAHO STEM ACTION CENTER

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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

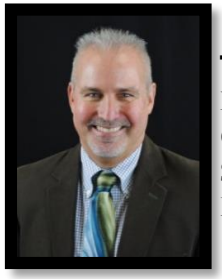
Dee Mooney / Vice Chair
Executive Director,
Micron Foundation

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

Jeff Rosser
Director of Continuous
Improvement,
Hecla Mining

Jennifer Jackson
Public Affairs and
Strategic Initiatives,
Idaho National Laboratory

Paul Casey
Director Research and
Development,
Chobani



Tim McMurtrey
Deputy Superintendent of
Operations,
State Department of
Education

Wendi Secrist
Director,
Idaho Department of
Labor

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.

Idaho STEM Action Center

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

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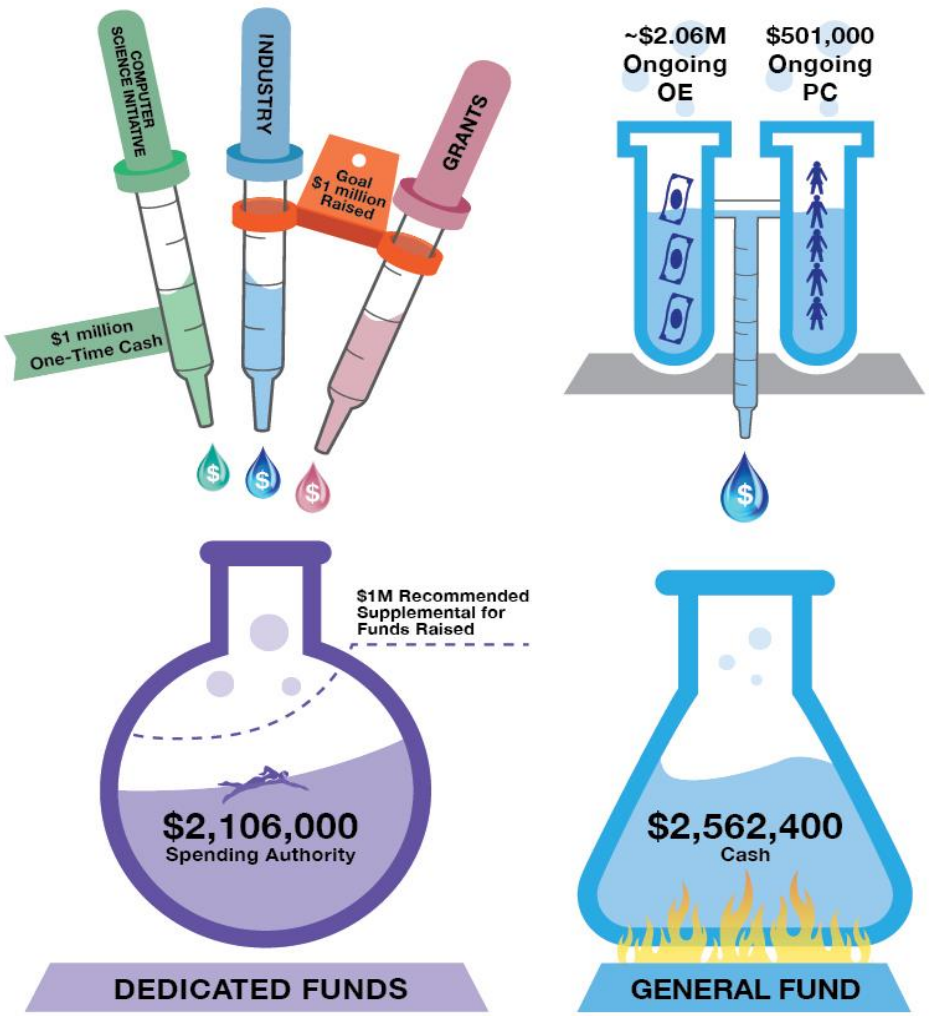
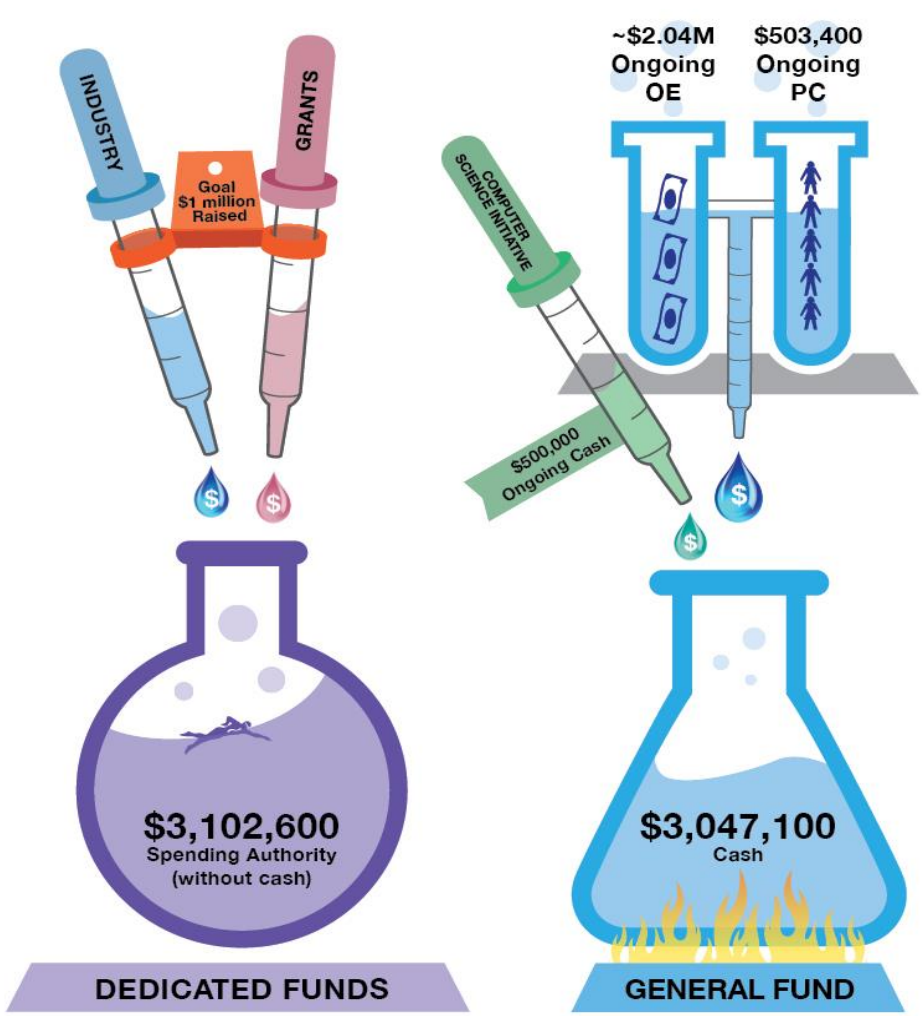
FY20 Appropriation: $5,668,400



Cash: $3,562,400

FY21 Recommendation: $6,149,700



Cash: $3,047,100

Budget Analysis by Goal (FY19 & FY20)

	FY19 – Actual	FY20 – Proposed (July 2019)
GOAL 1 ACCESS: STEM+CS Grants	**12%**	**7%**
GOAL 1 ACCESS: STEM+CS Professional Development	**26%**	**27%**
GOAL 2 ALIGNMENT: Competitions, Externships, Partnerships, Sponsorships, Mentorships, STEM Schools, Research	**42%**	**45%**
GOAL 3 AWARENESS: Outreach/Awareness Activities	**5%**	**11%**
Operating Expenses (rent, office, IT, supplies, software, contracts, travel, conferences)	**14%**	**9%**

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

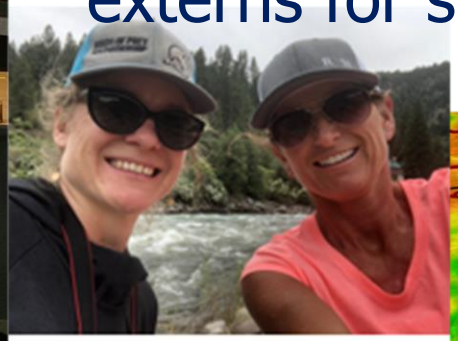
Goal 1 Access:
($1.2M, 27% budget)

- 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

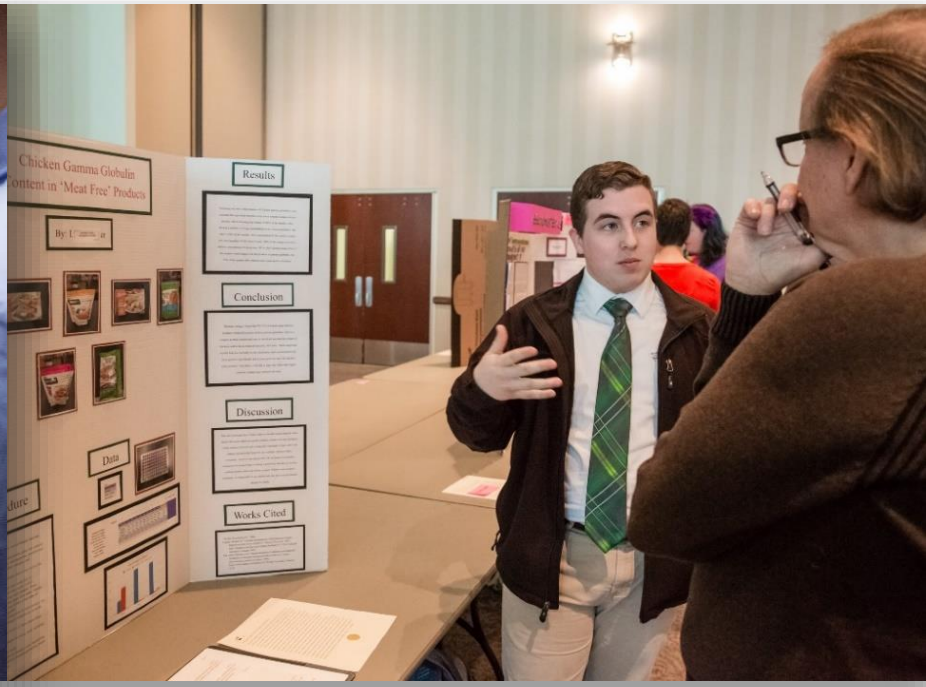
GOAL 2: Align STEM education & workforce

Funds Raised in FY20	$965,000
• Idaho National Laboratory	$113,000
• Micron Technology Foundation	$112,000
• Battelle	$63,000
• JR Simplot Company Foundation	$50,000
• Laura Moore Cunningham Foundation	$50,000
• Dutch Bros.	$32,000
• Citizen Schools	$26,000
• Power Foundation	$26,000
• J.A. & Kathryn Albertson Foundation	$25,000

Total In-Kind Donations, FY20

$1.65M

Includes grant reviewers, competition judges, training room space, mentors, industry partnerships, and media coverage



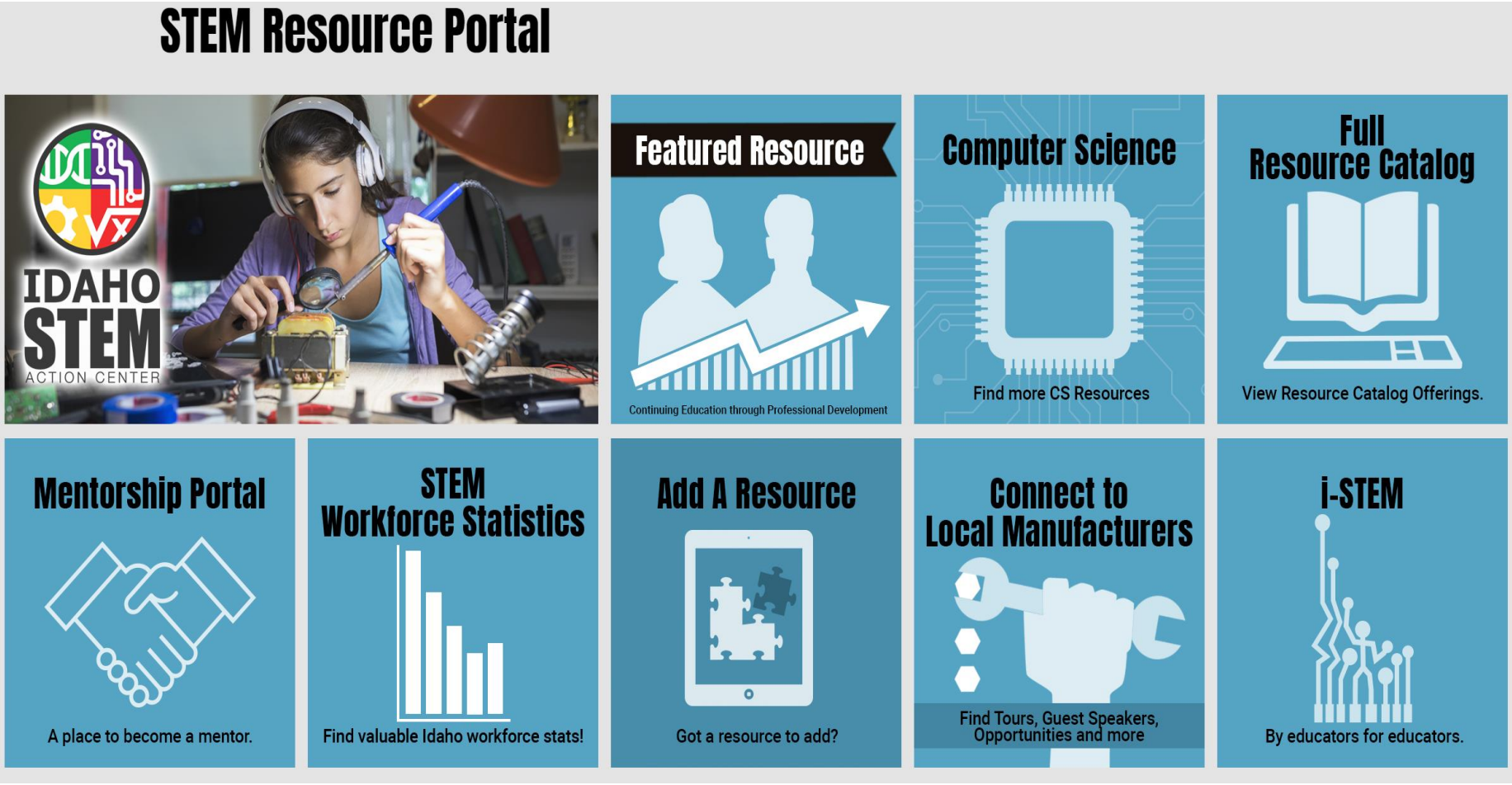
2nd in the Nation in Computer Science!

- Idaho 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**.

- 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.

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**!

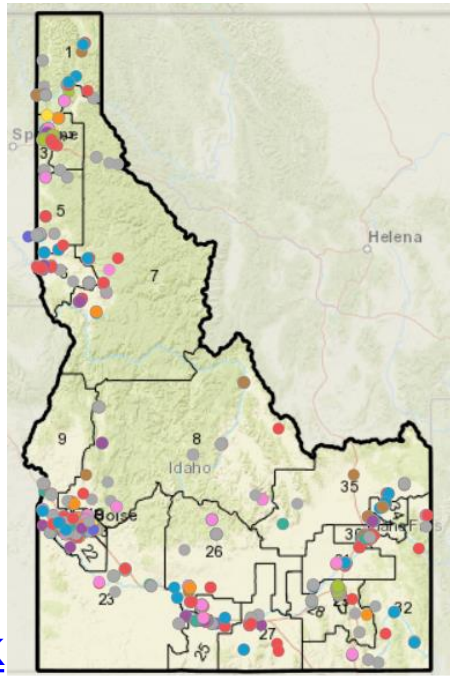
Available NOW!
Populated with 500 teachers and 150 mentors

https://mentorship.stem.idaho.gov/

GOAL 3: Increase awareness of the importance of STEM

Strategic Plan

Performance Report Metrics



Data Map Link

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

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

STEMPOWERS

Contact Information

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