



IDAHO
STEM
ACTION CENTER



i-STEM Institutes
Idaho Educator Professional Development
June 2018

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As Legislated in Idaho Code

(Idaho Code §67-823, §33-1633, and §33-4701)

- Support high-quality STEM and CS **professional development** for educators
- Distribute **grants** to students, educators, and communities
- Engage **industry** to support STEM/CS education outcomes
- Support student STEM and CS **competitions**
- Support STEM and CS **pilot projects**
- Serve as a **resource** center for instructional materials and best practices
- Support **traditionally underrepresented population** in STEM and CS
- Identify and recognize high quality **STEM Schools**
- **Work well with other** agencies and partners!



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



Engineering innovative STEM opportunities for educators, students, communities and industry to build a competitive Idaho workforce and economy.

Idaho STEM Action Center

Facts About Idaho Jobs

Idahoworks.gov has
over 22,000 job
opening with ~5,000
that are hard-to-fill,
open for 90+ days

Idaho has the fastest
population growth, the
3rd fastest job growth,
and 2nd fastest tech
sector growth

100% of Idaho industry
believe employees should
possess both technical
and 21st century skills



More 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.



WHY STEM?

In 2016, **3,818 STEM JOBS** WERE UNFILLED IN IDAHO, resulting in nearly **\$240 Million** of unclaimed personal income.

If these **STEM JOBS** were filled, state tax revenues would **INCREASE BY NEARLY \$14 MILLION.**

Idaho's STEM jobs **PAY WELL** **DOUBLE THE MEDIAN WAGE** of non-STEM JOBS.

In 2017, **6,000 STEM JOBS** WERE UNFILLED IN IDAHO, resulting in nearly **\$355 Million** of unclaimed personal income.

If these **STEM JOBS** were filled, state tax revenues would **INCREASE BY OVER \$20 MILLION.**

We are here to help!

Legislated Goals of STEM AC

- **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



21st Century Skill Development

We need critical and creative thinkers, collaborators, innovators, and problem-solvers

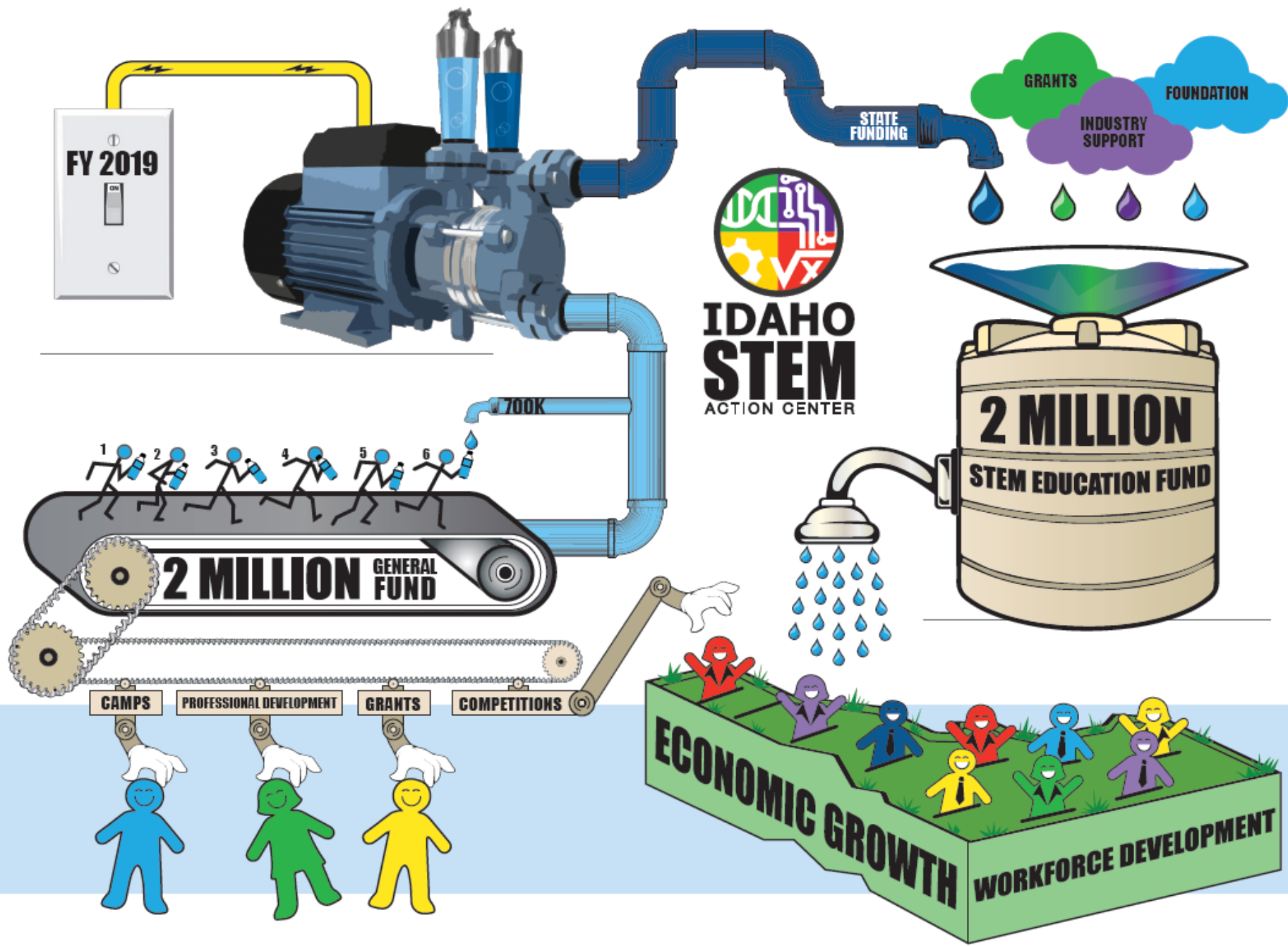


STEM learning builds these skills!

HOW DO WE DO THIS?

- Professional development opportunities
 - Grants to educators, schools, libraries, out-of-school organizations and more
- Student competitions and camp scholarships





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

- **Professional Development** - High quality STEM/CS PD (next slide)
- **Grants:** PK12, CS Device, Camps, Competitions, Family/Career STEM Events, and Sponsorships
- **Camp Scholarships:** STEM, CS, and Coding



- **Competitions:** Next slide
- **Awareness Events:** Family Day at the Fair, STEM Matters Day at Capitol, and Hour of Code



Professional Development

- i-STEM Summer Institutes
- FIRST Robotics
- C-STEM
- Code.org PD
- Educurious
- AP and Dual Credit PD
- Virtual Reality PD and resources
- BotBall Robotics PD and Materials
- ISEF PD, travel and materials grant
- Drones PD and Resources
- Making Sense of Science
- Idaho Math and Science Conference PD
- FabSLAM – 3D Fabrication PD and Showcase Events



Student Competitions

- Regional Idaho Science and Engineering Fairs
- FIRST Robotics Expansion Grant & Student Travel Grants
- FabSLAM – 3D Fabrication Middle School Competition
- BotBall Competitions (Regional and International)
- Invent Idaho's Lead Sponsor
- VEX Robotics
- CTE student competition travel
- Future Cities competition and travel
- Drone Competition
- Science Bowl
- Congressional App Challenge
- Math Counts



GOAL #2: Align education and workforce needs throughout Idaho



- Workforce Development Council, Apprenticeships, Internships, Teacher Externships (summer 2019)
- Project-Based Virtual Mentorship Platform (slide later)

- INDEEDS Award for excellent STEM educators
- Hour of Code, Code.org, and IDLA
- CS Co-Op, Higher Ed and Industry
- CS dual credit training
- Expansion of *IDoCode* CS teacher endorsement



GOAL #3: Increase awareness of STEM throughout Idaho

- **Presentations:** Local, state, and national
- **Interviews** on radio, news, blogs, and magazines
- **Sponsorships of Key Events:** Hispanic Youth Conference, Inspire to Hire, IASA, ISBA, Super Conference, Western Idaho Fair, Gowen Thunder, Lights On Afterschool, etc.



- **Grants:** Family STEM Awareness and Career Awareness
- **National STEMx** Board Member
- **Governor's Designee** on Workforce Development Council

Data From Family STEM/Career Awareness Events

Students

- 36% increase in awareness of STEM careers
- 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



Virtual, Project-Based, Statewide Mentorship Platform

- Focused on student projects, especially related to competitions
- Industry and higher ed support for educators whose students are working on projects that could benefit from additional outside-the-classroom support
- One of the most powerful tools for retention of students (especially females) in STEM is having a strong mentor
- Available NOW!
- <https://mentorship.stem.idaho.gov/>



NOW OPEN – STEM.Idaho.gov

- Learning Blade – STEM Career Awareness
- ISEF PD and Grant
- Code.org CS PD



ISEF PD and Grant

Idaho Science & Engineering Fair 2018 was a huge success!

Learn all about how to incorporate ISEF projects into your curriculum. CEU available.

Educators can get up to **\$3,000** to support student projects



Regional trainings:

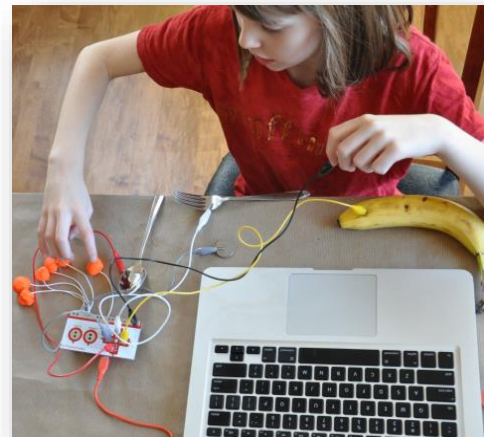
- NIC: August 6-7
- ISU: August 9-10
- BSU: August 13-14

Idaho Science and Engineering Fairs:

- Northern: March 1 (NIC)
- Eastern: March 8 (ISU)
- Western: March 15 (BSU)

This Summer and Beyond...

- Numerous PD opportunities this summer in both STEM and CS
- Significant support for STEM summer camps
- Check out your local library and Discovery Center of Idaho for resources and STEM AC-sponsored activities for kids!
- Many opportunities will open next spring!



Opening Fall

- i-STEM Strand Provider Applications
- PK12 Innovative STEM Grants
- Device Grants
- Travel grants to Math and Science Teachers Conference in Boise in October
- Student Competition Travel Grants



Opening in Winter

- Family STEM and Career Awareness Events Grants
- Student Competition Scholarships
- Camp and Out-of-School Grant
- Additional projects based on need



Springtime Opportunities

- Competition Season!
 - ISEF, FIRST Robotics, Invent Idaho, Future Cities, Science Olympiad, Math Counts, etc.
 - Possible new competitions: Drones, Hack-a-thon, App Challenges
- Summer PD for educators and camp grant scholarships opportunities open



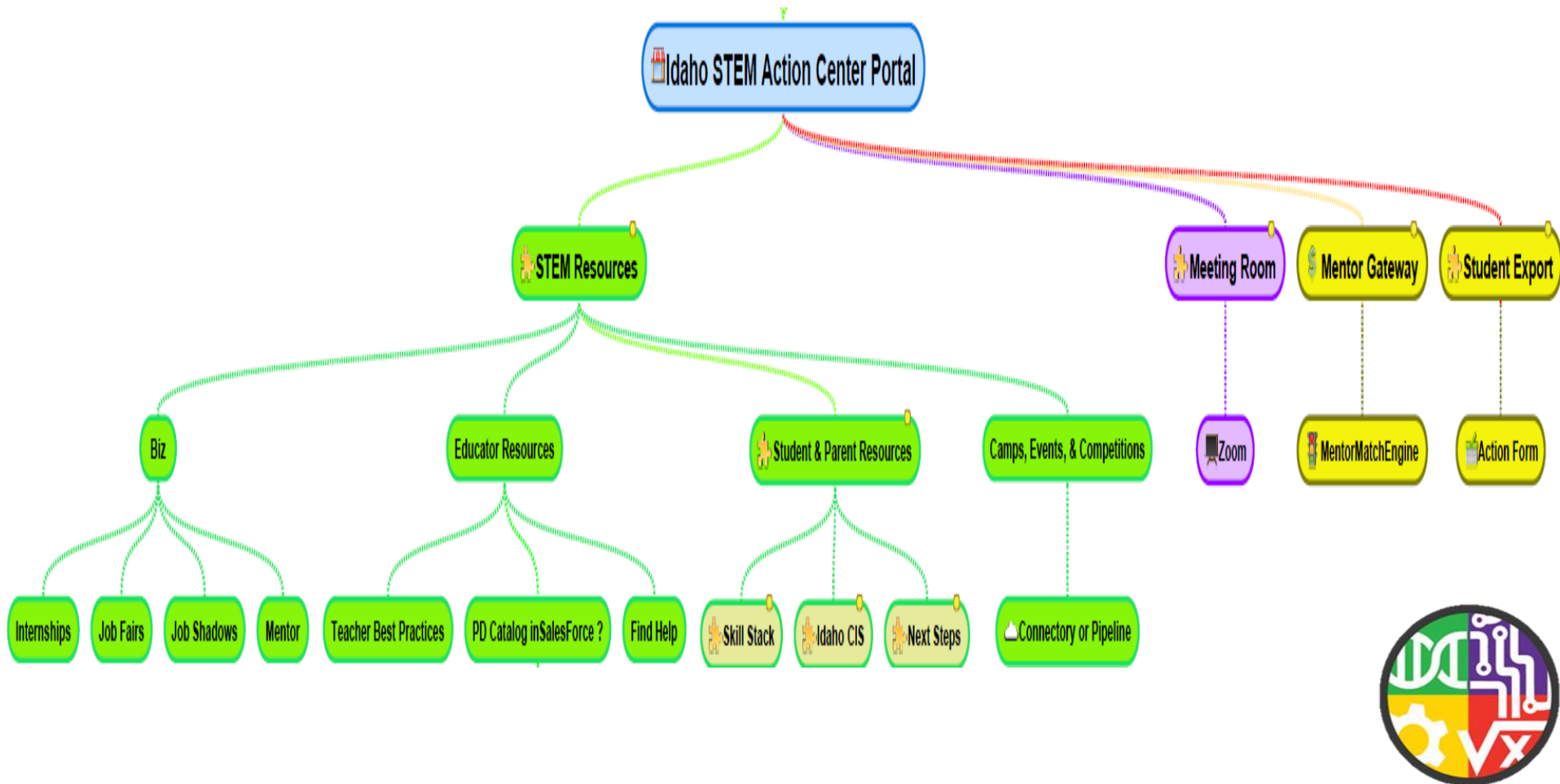
How do you apply to STEM AC?

- Sign up for a Community Grant Portal Account at STEM.Idaho.gov/grants (or login)
- Most opportunities are competitive so please:
 - Use proper grammar and complete sentences
 - Review the rubric and answer the questions completely
- Please return your required agreements to us *on-time* or you will lose your spot
- Please complete the final report *on-time* or your account will be suspended
- We are going to create webinars to support the online instructions soon!



Resources Portal

- Best Practices for STEM Educators (formal and informal)
- State and National STEM Resources



The Future of i-STEM

- P3 Sponsorship to help fund i-STEM strands
- Any Questions?



Questions? Suggestions? Needs? Concerns?



Stay Connected!

- Visit our **Website**: STEM.Idaho.gov
- Like Us on **Facebook**!
- Follow Us On **Twitter** #IdahoSTEMAC
- Sign up for our monthly **e-newsletter**



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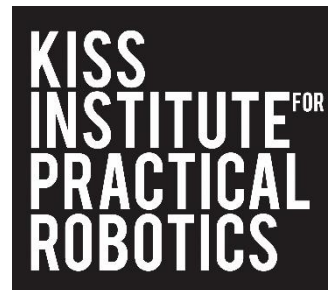
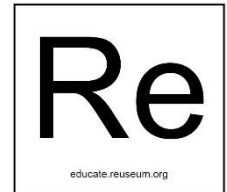
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