Board Meeting
August 8, 2016

Room WW17
1:00 - 4:00 pm
Welcome Finia Dinh

Computer Science Program Manager
CS Updates

- Code.org/IDLA
- CS Co-Op
- Dig n IT Camp
- Oracle
- Zero Robotics
CS Updates

- INDEEDS Awards
- Business Educator Exchange
- Congressional App Challenge
- IDOL STEM Occupational Projections
Occupations in Idaho: 2014 – 2024
Projected Annual Growth Rates

- Personal Care/Service: 3.1%
- Computer/Math: 2.7%
- Life/Physical/Social Science: 2.5%
- Arts/Design/Ent/Media: 2.4%
- Construction/Extraction: 2.3%
- Business/Financial Ops: 2.3%
- Legal: 2.2%
- Community/Social Service: 2.2%
- Food Preparation/Serving: 2.1%
- Management: 2.1%
- Healthcare Support: 2.1%
- Architecture/Engineering: 1.9%
- Installation/Maintenance/Repair: 1.8%
- Healthcare Practitioners/Technical: 1.8%
- Education/Training/Library: 1.7%
- Sales and Related: 1.6%
- Transportation/Material Moving: 1.6%
- Farming/Fishing/Forestry: 1.5%
- Building/Grounds Cleaning/Maintenance: 1.5%
- Protective Service: 1.4%
- Office/Admin Support: 1.3%
- Production: 1.1%

Source: Idaho Department of Labor and the U.S. Bureau of Labor Statistics
CS Updates

Occupations in SW Idaho: 2014 – 2024
Projected Annual Growth Rates

Source: Idaho Department of Labor and the U.S. Bureau of Labor Statistics
CS Updates

STEM Occupations 2014 – 2024
Projected Growth Rates for STEM and Non-STEM Occupations

<table>
<thead>
<tr>
<th></th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM</td>
<td>23.1%</td>
</tr>
<tr>
<td>Non-STEM</td>
<td>19.4%</td>
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</tbody>
</table>

Source: Idaho Department of Labor and the U.S. Bureau of Labor Statistics
CS Updates

STEM Occupations: 2014 – 2024
Projected Openings from Growth and Replacements

- Science/Engineering/Math/IT: +10,295 +8,777
- Health: +7,698 +8,311
- Social Science: +766 +349
- Architecture: +166 +62

Source: Idaho Department of Labor and the U.S. Bureau of Labor Statistics
STEM Updates

 ✓ Intel Science & Engineering Fair PD

 ✓ Idaho Day of Design

 ✓ STEM Day at the Fair

 ✓ Salesforce/Community Grant Portal
ISEF Updates

- Collaborating with BSU, U of I, ISU in year one
- Working group of 12 individuals formed
  - PD is occurring now for ~30 educators (10 per region); educators receive $3,000 for stipend, travel to PD and student travel to Fair + Fair supplies
- Working on industry support
- Communication plan is in progress
- 3 Regional Fairs will occur late Feb/early March
- 1-2 winners from each region sent to Nationals
STEMx Advisory Board

• Angela was recently selected to serve as a member of the seven panel STEMx Advisory Board
  • STEMx is a national group involving 21 states and focused on advancing STEM-related issues nationwide

• In this capacity, she will:
  • Help identify STEM education issues that should be addressed by STEMx;
  • Prioritize topics and seek additional STEM funding, support and legislation on a national level;
  • Oversee the creation of the agenda for the national STEMx meeting
Contactors Hired

• Crispin Gravatt - Grants
• Cindy Thorngren - Mentorship
• Gina Schatteman – PD
• Christina Linder - Research & Review
• Cathy Salas – Temp administrative support through October
• ISEF Contractors – Merrie Rampy (K12), Ken Wareham (Higher Ed and Industry) and Nick Hoffman (onsite fairs) + 8 volunteers
• Media, Public Relations, & Communications
  • Chad Gammel – website, social media, STEM event coordination, & PR strategies
  • Tony Harrison – PR, media outreach & communications
  • Jonny Fuego – Graphic Designer
Contactor Needed

- **Grant Writer** to help us secure federal, state and industry grants
FY16 Performance Report

- See handout
- Due September 1st per law
- Performance measures based on our Strategic Plan
- Docs sent for review & input over the next 2 weeks
- Template can be found at: https://dfm.idaho.gov/perfreport2018/perfreport2018.html
Focuses on 5 Broad Areas

- Definition of STEM
- Definition of high quality STEM professional development
- Definition of traditionally underrepresented populations in STEM
- Typical college/career pathways leading to STEM jobs
- Industry and workforce needs in STEM
Definition of STEM

- STEM to the Center means integration of at least two STEM subjects
- Why?
  - STEM professionals practice integrated STEM
  - Ensures differentiation from the SDE
- Definition of STEM is broad to match the Department of Labor
  - 184 occupations including traditional STEM professions + health care + some social sciences
High Quality STEM PD

• Cannot be “one and done” or “drive by” PD
• Must include buy-in and support from the administration
• Must be sustained and intense
  • 30 – 100 hours is most effective over 6-12 months
  • Over 80 hours = teachers doing more hands-on & inquiry-based instruction
• Could be face-to-face, virtual or blended
STEM Works for Selecting PD

- Handout Overview
- Using STEM Works rubric + Idaho-specific rubric with Idaho reviewers to select PD opportunities via RFP
- Programs can run January 2017 – December 2017 with an option to renew for an additional year
- Evaluation data will be collected from educators to determine effectiveness of the programs
Underrepresented Populations

- Focuses on 4 groups
  - Geographic Location
  - Gender
  - Race/Ethnicity
  - Socioeconomic Status
College & Career STEM Pathways

- Middle School is critically important
- A variety of factors increase interest and awareness
  - Interest in STEM coursework
    - Project-based, relevant, hands-on, choice, coursework exposure
  - Interest in a STEM career
    - Mentorships, job shadows, competitions & awareness events
Industry & Workforce Needs

• According to Department of Labor
  ➢ By 2025 Idaho will be lacking over 63,000 individuals needed to fill projected positions
  ➢ 60% of Idaho’s projected jobs will require college and/or training beyond a high school diploma

• Focuses on Industry Education Connections
  ➢ Mentorships, internships, career awareness, post-secondary-university connections
Project-Based Mentorship Platform

RFP process started to obtain a statewide mentorship platform which:

- Must be virtual
- Must connect industry professional to students via an educator and a project (ISEF, FIRST, etc)

Our goal is to be up and running by January 2017
Budget Discussion FY17

STEM and Computer Science

HANDOUTS
## FY17 Analysis

<table>
<thead>
<tr>
<th>BY PROJECT</th>
<th>STEM</th>
<th>CS</th>
<th>TOTAL</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Grants</td>
<td>575,000</td>
<td>570,000</td>
<td>1,145,000</td>
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<td>PD</td>
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<td>456,500</td>
<td>938,500</td>
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<td>Scholarships</td>
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<td>449,000</td>
<td>660,000</td>
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<td>Competitions</td>
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<td>55,000</td>
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<td>Mentorship</td>
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<td>160,000</td>
<td>340,000</td>
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<td>Conferences</td>
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<td>35,000</td>
<td>155,500</td>
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<td>Marketing, Promotion and Evaluation</td>
<td>122,000</td>
<td>84,000</td>
<td>206,000</td>
<td>5.04</td>
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<td>Operating Expenses</td>
<td>103,500</td>
<td>74,000</td>
<td>177,500</td>
<td>4.34</td>
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<tr>
<td>Pilot Projects</td>
<td>45,000</td>
<td>116,500</td>
<td>161,500</td>
<td>3.95</td>
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<tr>
<td>TOTAL</td>
<td>2,091,000</td>
<td>2,000,000</td>
<td>4,091,000</td>
<td>100</td>
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Budget Request FY18
(See FY17 Appropriation Handout)

STEM and Computer Science

Open Discussion related to request
DUE Sept 1, 2016
FY18 Budget Request

- Hold funds stable?
  - Request that these be ongoing?

- Request new person (or two)
  - Grant and technical records specialist
  - Administrative assistant
  - Public information officer
FY18 Possible Legislation

- STEM School Designation (See Handout)
  - Certifying (and providing incentives) for a statewide STEM designation
  - Research has been conducted looking at other states to determine if legislation and/or funding is needed
Upcoming Events

Fall Board Meeting
October 11, 1:00 - 4:00pm