

Document A



GOVERNOR'S STEM ADVISORY COUNCIL

dedicated to building a strong STEM education foundation for all Iowans

Budget Year 4 (FY2016)

APPROVED BY GOVERNOR'S STEM ADVISORY COUNCIL EXECUTIVE COMMITTEE ON 06/23/2015

1. STEM PROGRAMMING		
A. Regional STEM Scale-Up Programming	6 @ \$500,995.50 = \$3,005,973	\$3,819,841
B. Real World Externships for Teachers of Math, Science, Technology	\$163,868	
C. School-Business Partnerships Support – STEM Best Program/STEM Redesigned Learning Environments	\$150,000	
D. Statewide IT Academy	\$500,000	
2. REGIONAL STEM NETWORK		
Regional STEM Management, Hub Support	6 @ \$70,710 = \$424,260	\$424,260
3. STATEWIDE STEM RESPONSIBILITIES		
A. Statewide STEM Monitoring – UNI's CSBR, UI's Iowa Testing, ISU's RISE	\$189,700	\$441,712
B. Public Awareness, Messaging, Communications, Education and Outreach [Strategic America portion to include 1:1 match]	\$169,012	
C. Conferences, Exhibits, Forums, Meetings, Events	\$83,000	
4. COUNCIL OPERATIONS		
A. Operations Center Staffing – executive director, assistant director for development, financial/program manager, communications, ½ time secretary, student staffing	\$491,890 + approx. 2.5% = \$504,187	\$514,187
B. Office Supplies and Equipment	\$10,000	
TOTAL STEM State Appropriation for FY2016		\$5,200,000

IOWA GOVERNOR'S STEM ADVISORY COUNCIL

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Document B

Programs of Iowa's STEM Council

Regional STEM Network: Six regions, each operated by a regional STEM manager housed at a hub institution and each guided by a Regional STEM Advisory Board. School-business matching, regional communications, events and local implementations of Council programs.

1. **STEM Scale-Up Program.** Exemplary S-T-E-M programs in engineering, computers, energy, mathematics, basic science and more provided to ~2,500 PreK-12 educators and ~100,000 children throughout the state every year.
2. **STEM BEST (Businesses Engaging Students and Teachers).** A total of 8 (so far) community collaborations involving school and business partnerships.
3. **STEM RLE (Redesigned Learning Environments).** A total of 13 (so far) re-designed 21st century learning spaces along with the preparation of educators capable of conducting student-centered, active, problem-solving instruction making purposeful connections to local business partners.
4. **Iowa STEM Teacher Externships in Mathematics, Science and Technology.** Six-week, paid, summer professional development in local industries and businesses for STEM teachers in Iowa.
5. **STEM Festivals.** Engaging, free, hands-on educational experiences (45 last year across Iowa) for preK-12 youth and their families.
6. **I.O.W.A. STEM Teacher Award.** Kemin Industries sponsored award to honor certified K-12 teachers in Iowa who teach a science, technology, engineering and/or mathematics subject and who are inspiring Iowa's students to develop a passion for STEM subjects.
7. **Code Iowa.** Partnership with Code.org on the "Hour of Code" during national Computer Science Education Week. Some 800 Iowa schools and organizations committed to doing an Hour of Code.
8. **Microsoft IT Academy.** A software and systems certification program that bridges the world of education with the world of work. 150 Iowa schools are involved, thousands of kids have earned certifications.* (*Due to be re-bid in 2016*)
9. **STEM Council Seal of Approval.** Ten (so far) outstanding, high quality non-Council programs affiliated through common goals.
10. **STEM Teaching Endorsement.** Three universities (so far) with at least 10 more shortly, producing STEM teachers.
11. **STEM Day @ State Fair.** Annually engages about 10,000 Iowans via dozens of exhibits, stage acts and vendor partners.
12. **STEM Day @ State Capitol.** Annually engages legislators via dozens of exhibit partners and corporate-sponsored lunch.
13. **Annual State STEM Summit.** Four-to-five hundred attendees learn from and contribute to Iowa STEM.
14. **STEM Messaging Campaign.** In collaboration with Strategic America: staff training in communications, production of print, radio, and television content, event promotions, branding and more.
15. **OTHER RESOURCES PRODUCED BY STEM COUNCIL**
 - a. **Business Engagement Toolkit.** Programs and guidelines that engage business and education in STEM.
 - b. **Iowa STEM Evaluation Report** Conducted by a consortium of evaluation centers at the University of Northern Iowa, the University of Iowa and Iowa State University.
 - c. **STEM On-line:** Website - daily maintained and updated array of resources, data and information. Twitter, Instagram, Facebook communication platforms updated frequently.
 - d. **STEM Video Library.** A growing array of public awareness videos on Youtube at <https://www.youtube.com/user/iastem>.

Active Working Groups: Focused on Council priorities: Computer Science, Ag. Science, Counselors, Volunteering, Arts, Informal/Nonformal, Broadband, 4-year and Community College connections, and others convened as needed (e.g., proposal or award reviewers, website design, event planning, etc.).

DOCUMENT C

Key Annual Indicators

A. Key Indicators Looking Good	B. Key Indicators Showing Gaps	C. Indicators Needed
1. New school-business partnerships (376 last year).	1. Iowans who view STEM education overall quality as high has dropped from 65% to 59% since 2012.	1. Change over time for some of the Indicators.
2. Higher mathematics and science test scores for participants in STEM programs (6% higher in National Percentile Rank) compared to students statewide on the Iowa Assessments.	2. Student participation in Scale-Up programs is 46% female and 54% male.	2. Minority participation in STEM programs.
3. Mathematics proficiency since 2011 has risen across female, African American, Hispanic and low income.	3. Gender gap in STEM interest beginning in middle school.	
4. Proportion of Iowans college ready in science has increased 7 percentage points since 2012 (ACT).	4. Proportion of Iowans college ready in mathematics has decreased 4 percentage points since 2012 (ACT).	3. Secondary school STEM elective enrollment patterns, trends.
5. Interest in STEM has increased 2 percent across all demographic groups since 2010 on ACT.	5. Overall drop in STEM interest beginning in middle school.	4. Career awareness.
6. Student aspiration to obtain a bachelor's degree in STEM has increased from 46% to 54% the last five years.	6. Top 5 STEM majors of females are in health fields; for males, engineering, medicine, athletic training and computer science/programming.	5. Student interest in attaining sub-four year degrees in STEM.
7. Ninety percent of Scale-Up participants report greater interest in at least one STEM subject or in a STEM career.		6. Transition (tracking) from our programs to post-secondary.
8. Initial teaching licenses in STEM fields increased 9.4% last year.	7. Standard licensure in mathematics (down 20%), science (down 16%) and technology (50%).	7. Nontraditional pathfinders to teaching (e.g. intern License, STEM endorsement).
9. Minority STEM field completions at community colleges increased 69 percent since 2010.	8. Overall STEM degrees awarded at lowa community colleges from 2010 to 2014 decreased by 1%.	
10. STEM degrees at lowa public universities has increased 12 percent since 2010.		
11. STEM degrees at lowa private colleges has increased by 11 percent since 2010.		
12. Most Iowans believe STEM strengthens the state economy (89%).	9. Rural awareness of the STEM acronym is 35% vs. urban 51%.	8. Iowa STEM employment trends.
13. Private sector investment in STEM Council programs increased 32% from 2014 to 2015.	10. Private sector financial investment – a total of 51 businesses invested \$362,365.	9. Private sector investment in STEM outside of Council related programs.