Iowa STEM — an overview
Iowa’s Shared Mission for Critical Thinkers
What is STEM?

“...an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons as students apply science, technology, engineering and mathematics in contexts that make connections between school, community, work and the global enterprise enabling the development of STEM literacy and with it the ability to compete in the new economy.”

Motive and Mission

• Economic development advantage
• STEM careers pay better, more equitable, recession-proof
• **STEM jobs** growing 4x the rate of other fields
• STEM-literacy = quality of life

Improve performance and increase interest of Iowa youth in STEM
Who is Iowa STEM

Governor's STEM Advisory Council
Executive Order 81 – May 2013
Executive Order 74 – July 2011

Governor Terry Branstad

LT Governor Kim Reynolds
Dr. Chris Nelson, Pres. & CEO, Kemin Ind.
Co-Chairs

Executive Committee
N = 15

Advisory Council
N = 47

Current Pursuits

STEM Awareness and Messaging
STEM Support of Arts and Culture
STEM Website Redesign
Higher Ed STEM Network
Business Engagement Development
STEM Active Learning Community Partnership
STEM Support of Ag Science
STEM Support of Computer Science
STEM Engagement of School Counselors
STEM Volunteer Service
Kemin STEM Education Award

STEM Festivals
STEM & Family Consumer Science
Statewide STEM Conference Planning
STEM Seal of Approval Enforced Recognition
Redesigned STEM Learning Environments
OECD Test for Iowa
Statewide Broadband
IT Academy
STEM Scale-Up Program Selection and Implementation
Real World Externships
Hour of Code
Center for Advanced Professional Studies (CAPS)

6 STEM Regions

Regional STEM Hubs

Advisory Board
Northwest Molly Faber
ILCC North Central Paul Gibbins
ISU
Southwest Deosia Frazier
SWCC
Southeast Kristine Bultock
URCCC
South Central Sarah Derry
Drake

Regional Hubs
Design & Governance Committee
Programs Scale-Up
Design & Implementation Committee
Teacher Think Tank
STEM License/Endorsement How To (w/BOEE)
STEM Non-traditional Teaching Pathway (w/BOEE)
Teacher Recruitment & Preparation
Public/Private Partnerships & Mapping STEM to Economic Development
Technology – Enhanced Instruction for Global Learners
STEM Education Policy
STEM for All – Highly Skilled, Underserved, and Non-Traditional
Learner Readiness For H.E. and Career
Public Awareness of STEM Ed. for Economy & Society

Founds Purposes

Strategic America (P.R. Partner)
Greater DM Community Foundation (Ofns Fiscal Agent)
Evaluation Consortium/External Evaluation Advisory Board
Iowa STEM Regional Network
Iowa STEM activities

- Scale-Up
- Festivals
- STEM Endorsement
- STEM Professional Development
- Tchr. Externships
- IT Academy
- STEM Schools (BEST and RLE)
- STEM resources
- Networks: Informals, CC’s, Univ.s
- Business engagement toolkit
- Code Iowa
- Seal of Approval
- STEM Award for Inspired Teaching
- Public Messaging Campaign
Iowa STEM Externships

Ruby Golnick, Clear Lake
Andrew Reinert, Science teacher, Dubuque Senior High School

Steve Waldstein, Technology and Engineering teacher, Armstrong-Ringsted High School

Taylor Fountain, Engineering teacher, Muscatine High School

Lori Carter, Math and Computer Science teacher, Glenwood Community High School

Andre Echols, Math teacher, Iowa City West High School

Dirk Homewood, Math teacher, Cedar Falls High School

Andrew Reinert, Science teacher, Dubuque Senior High School

Frank Vanderpool, Industrial Technology teacher, Pleasantville HS

Lori Carter, Math and Computer Science teacher, Glenwood Community High School

Ricardo Martinez, Math teacher, Colo-Nesco Learning Center

Kayla Brauer, Science, Johnston MS

GREATNESS COMES FROM IOWANS
Effects of Iowa STEM

Figure 64. National Percentile Rank of Math and Science achievement on the Iowa Assessments, statewide versus Scale-Up student comparison.
Iowa STEM Public Awareness

Greatness STEMS from Iowans.

SCIENCE Technology Engineering Mathematics
STEM: Iowa’s Edu-nomic Development Mission