

One Door, Many Paths Conference

June 27, 2016, 11:00am



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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.”

- Tsupros, N., Kohler, R., & Hallinen, J. (2009). *STEM education: A project to identify the missing components. Intermediate Unit 1: Center for STEM Education and Leonard Gelfand Center for Service Learning and Outreach, Carnegie Mellon University, Pennsylvania.*

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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

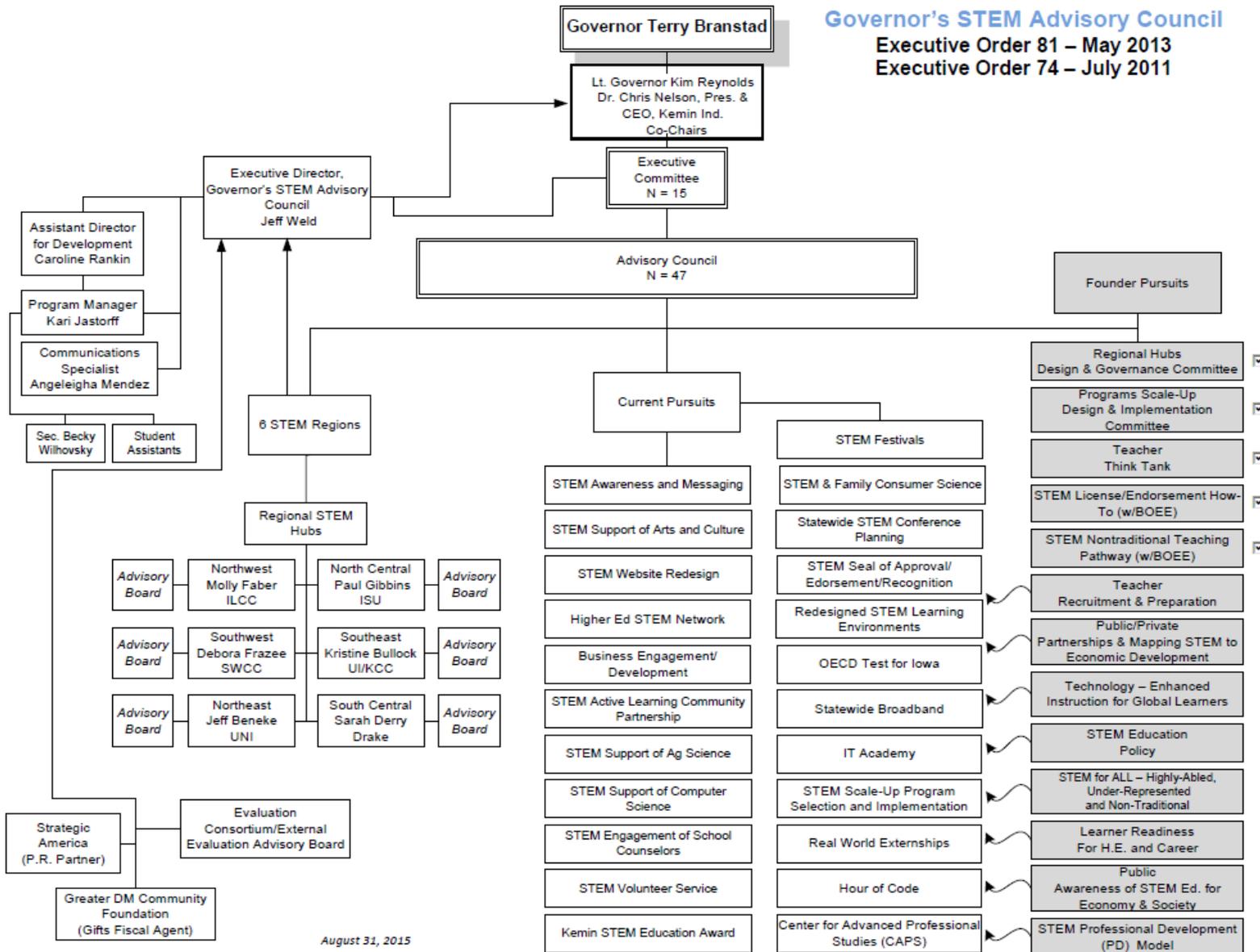


Who is Iowa STEM

Governor's STEM Advisory Council

Executive Order 81 – May 2013

Executive Order 74 – July 2011



August 31, 2015

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Iowa STEM Regional Network



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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

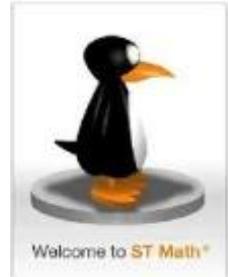


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Iowa STEM Scale-Up 2015-16



Developed by the Museum of Science, Boston



Pint Size Science



Iowa STEM Externships



Ruby Golnick,
Clear Lake



Andrew Reinert,
Science teacher,
Dubuque Senior
High School



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



Andre Echols, Math
teacher, Iowa City West
High School



JOHN DEERE



Dirk
Homewood,
Math teacher,
Cedar Falls
High School

Vermeer



GKN Armstrong Wheels



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



HNI Corporation



Taylor Fountain,
Engineering teacher,
Muscatine High School



Ricardo Martinez, Math
teacher,
Colo-Nesco Learning
Center



Kayla Brauer,
Science,
Johnston MS

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Frank Vanderpool,
Industrial Technology
teacher, Pleasantville HS

Effects of Iowa STEM

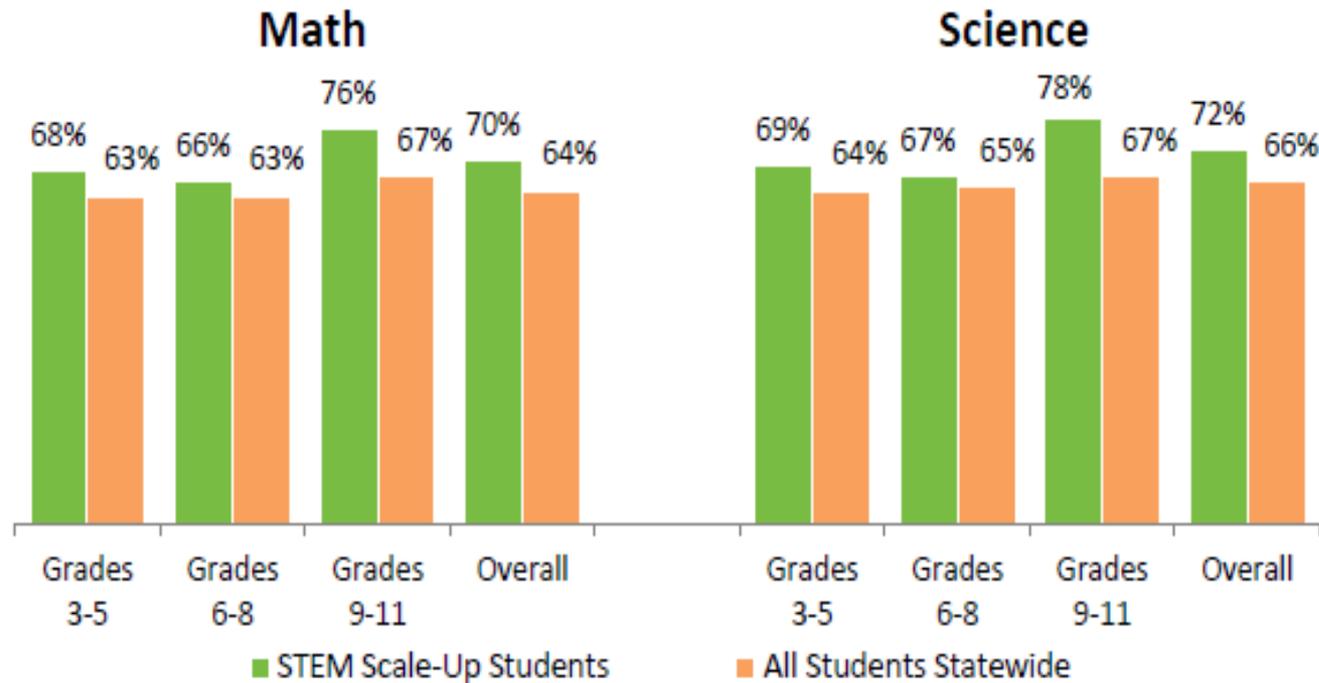


Figure 64. National Percentile Rank of *Math* and *Science* achievement on the Iowa Assessments, statewide versus Scale-Up student comparison

Iowa STEM Public Awareness





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STEM: Iowa's Edu-nomic Development Mission