American STEM Education

An Edu-nomic Development Imperative

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Alabama Mathematics, Science, and Technology Initiative
Arizona STEM Education Center STEMAz
Arkansas Science & Technology Authority
California Science and Math Coalition
Colorado Mathematics, Science, and Technology Education Coalition
Connecticut CONNvene (within CT Academy for Education)
Delaware Foundation for Science and Mathematics Education
Florida Coalition for Improving Mathematics and Science Literacy
Georgia Coalition for Science, Technology & Mathematics Education
Hawaii Association of Mathematics and Sciences Education
Idaho Science, Mathematics, and Technology Coalition
Illinois Mathematics, Science and Technology Alliance
iSTEM Indiana
iSTEM (Southern Indiana and Ivy Tech Community College)
Iowa Governor’s STEM Council
Kansas Mathematics and Science Education Coalition
Kentucky Science and Technology Corporation
Louisiana Systemic Initiatives Program
Maine Mathematics and Science Alliance
Maryland Mathematics and Science Coalition
Center for Excellence
Massachusetts STEM Collaborative
Michigan STEM Coalition
Minnesota SciMathMN
Mississippi Coalition for Mathematics, Science and Technology
Missouri METS
Montana Mathematics and Science Society
New Hampshire Mathematics, Science and Technology Coalition
New Jersey Mathematics and Science Coalition
New Mexico Partnership for Mathematics & Science Education
New York STEM Network
North Carolina STEM
North Dakota Mathematics and Science Alliance
Ohio STEM Learning Network
Oklahoma Coalition for the Advancement of Science and Mathematics Education
Pennsylvania STEM Initiative
South Carolina’s Coalition for Mathematics and Science
Tennessee Mathematics, Science, and Technology Education Center
Texas Business and Education Coalition
Vermont State Mathematics Coalition
Virginia Mathematics and Science Coalition
West Virginia Mathematics and Science Coalition
Wisconsin Science Network
Wyoming Mathematics and Science Education Coalition
Preparing the Next Generation of STEM Innovators: Identifying and Developing Our Nation’s Human Capital
**STEM Investment**

- Fed. investment in STEM is about $3.2 billion annually across 15 agencies and 250 programs
- Private foundations (e.g., Gates, Boeing, Simons, HHMI, Carnegie, Kellogg) invested $2 Billion last year

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**STEM and the Economy**

- 19.1 million Americans are in STEM jobs
- 10% more than just two years ago
- STEM jobs growing at twice the rate of other jobs to 2029

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Iowa STEM activities

- STEM Scale-Up
- STEM Schools (BEST®)
- Teacher Externships
- Computer Science = Elementary
- STEM Festivals
- STEM Teaching Endorsement
- STEM Professional Development
- Pre-apprenticeships
- Microsoft IT Imagine
- Business engagement toolkit
- Seal of Approval
- STEM Teaching Award
- Public Messaging Campaign
Keys to Success

- Advocacy at the top
- Public-Private Partnership
- Bipartisan
- Stakeholders at the table
- “Switzerland” infrastructure
- Transparency
- Branding/Marketing
- Private investment
- Teachers as workforce developers
- Business see schools as talent farms
- Evaluation – ROI
Speaking of ROI

ACADEMIC PERFORMANCE

STUDENT INTEREST IN STEM

https://www.iowastem.org/iowa-stem-evaluation
CHARTING A COURSE FOR SUCCESS: AMERICA’S STRATEGY FOR STEM EDUCATION

A Report by the
COMMITEE ON STEM EDUCATION
of the
NATIONAL SCIENCE & TECHNOLOGY COUNCIL

December 2018

GOALS FOR AMERICAN STEM EDUCATION

* Build Strong Foundations for STEM Literacy *
* Increase Diversity, Equity, and Inclusion in STEM *
* Prepare the STEM Workforce for the Future *

Actions

1. Foster STEM Ecosystems
2. Increase work-based learning
3. Blend formal/informal education
4. Innovation and entrepreneurship
5. Make mathematics a magnet
6. Converge the disciplines
7. Digital literacy and cyber-safety
8. Computational thinking
9. Digital teaching and learning
Thank you

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Midwestern Legislative Conference
THE COUNCIL OF STATE GOVERNMENTS