


U.S. FEDERAL STEM EDUCATION STRATEGIC PLAN

AN ASK ME/TELL ME SESSION

AGENDA

- ▶ 15 min - Federal STEM Education Strategic Plan
- ▶ 15 min - Opportunities for Our Field
- ▶ 10 min - Q&A
- ▶ 25 min - Table Discussion
- ▶ 10 min - Share-out

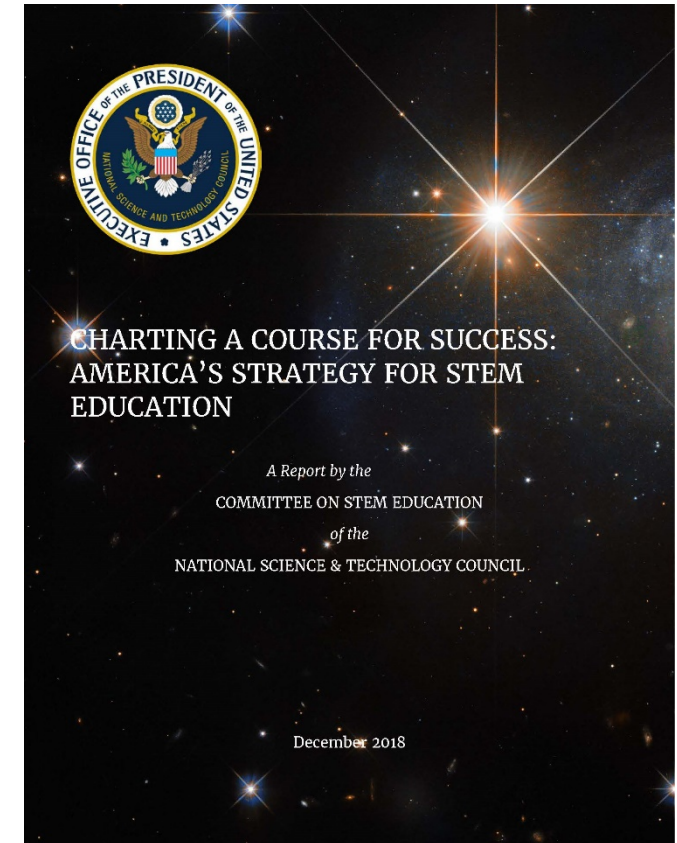
The background is a deep blue and black starry night sky. A prominent bright starburst with a white core and orange and blue rays is located in the upper right quadrant. A grid of thin white lines is overlaid on the sky, with a vertical line passing through the starburst and a horizontal line intersecting it. Other smaller stars and starbursts are scattered across the field.

Charting a Course for Success: America's Strategy For STEM Education

Why a Federal Strategic Plan for STEM Education?

The 5-year Strategic Plan meets the requirements of Section 101 of the America COMPETES Reauthorization Act of 2010.

Establishing a path to basic STEM literacy for everyone is vital to preparing a diverse workforce needed for the United States to lead and prosper in an increasingly competitive world driven by advanced technology.



<https://www.whitehouse.gov/wp-content/uploads/2018/12/STEM-Education-Strategic-Plan-2018.pdf>

A Strategy Informed by Stakeholder Input



First-of-its-kind State-Federal STEM Education Summit brought together STEM education specialists from all 50 States.

Input was provided by a Federal advisory committee, comprised of 18 members from academic institutions, nonprofit organizations, and industry, including in-school, out-of-school, and informal education practitioners.

The White House Office of Science and Technology Policy held over 200 listening sessions with a broad range of stakeholders.

An Interagency Process



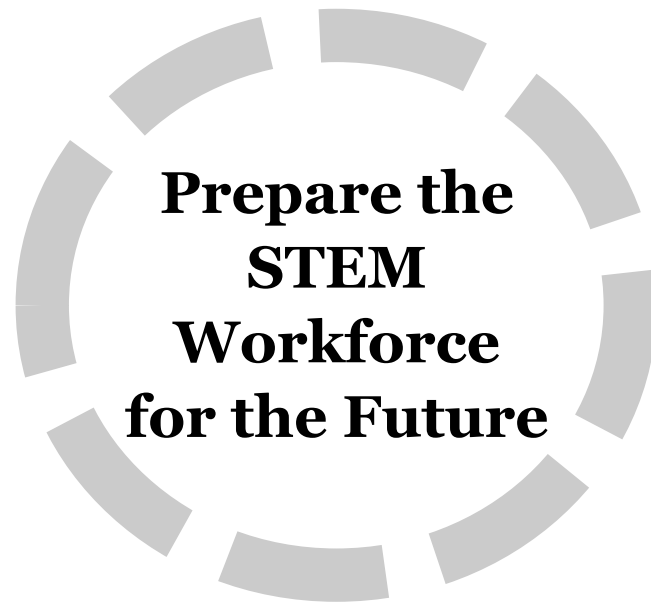
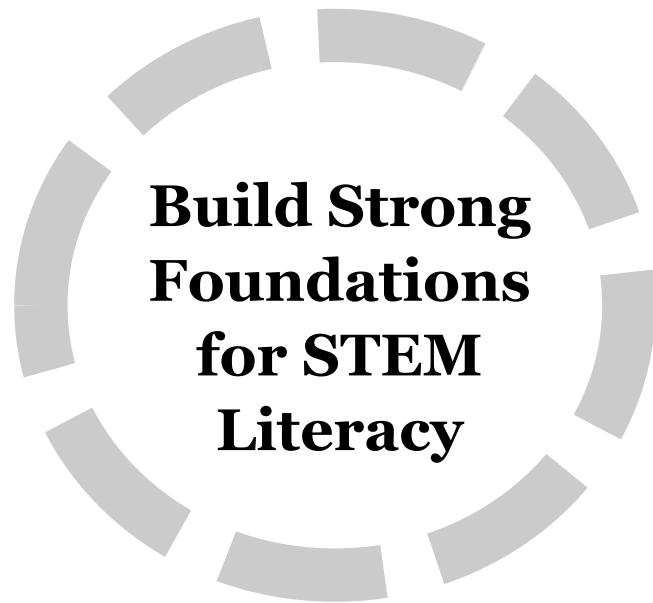
The Strategic Plan was developed by the National Science and Technology Council's Committee on STEM Education (CoSTEM) and the White House Office of Science and Technology Policy.

The Federal Coordination in STEM (FC-STEM) subcommittee of CoSTEM and representatives from its member agencies were instrumental in the plan's drafting.

Goals of the Strategic Plan

All Americans will have lifelong access to high-quality STEM education and the United States will be the global leader in STEM literacy, innovation, and employment.

Plan Vision Statement



Pathways for Success

➤ Develop and Enrich Strategic Partnerships



Cultivate new or strengthen existing connections between educational entities and the broader communities they serve.

Pathways for Success

➤ Develop and Enrich Strategic Partnerships

Foster STEM ecosystems that unite communities in workforce development.

Increase work-based learning and training through educator-employer partnerships.

Blend successful practices from across the learning landscape.

Pathways for Success

➤ Engage Students where Disciplines Converge



Teach STEM as an interwoven and complex pursuit that blends disciplines and makes STEM learning meaningful and inspiring.

Pathways for Success

➤ Engage Students where Disciplines Converge

Advance innovation and entrepreneurship education.

Make mathematics a magnet.

Encourage transdisciplinary learning.

Pathways for Success

➤ Build Computational Literacy



Ensure that STEM education is heavily imbued with computational skills and accessible through digital means.

Pathways for Success

➤ Build Computational Literacy

Promote digital literacy and cyber safety.

Make computational thinking an integral element of all education.

Expand digital platforms for teaching and learning.

Pathways for Success

➤ Operate with Transparency and Accountability

The image displays two related educational resources. On the left is a dark-themed interface titled "Select topics to Find What Works based on the evidence". It features a grid of 12 white icons, each representing a different educational topic: Literacy (open book), Children and Youth with Disabilities (heart with hand), Early Childhood (Pre-K) (ABC block), Mathematics (math symbols), English Learners (globe with EL), K-12 Kindergarten to 12th Grade (K-12 text), Science (flask), Teacher Excellence (teacher at board), Path to Graduation (graduation cap), Behavior (person with hand raised), Charter Schools (school building), and Postsecondary (classroom building).

On the right is the cover of the "2017 Summative Evaluation Report" for the "Army Educational Outreach Program". The cover includes the text "IT STARTS HERE. ★", "Army Educational Outreach Program", "2017 Summative Evaluation Report", "PART 1: Executive Summary", and "May 2018". It features a photograph of two students in a lab setting and the "aeop" logo.

Use evidence-based practices and assessments that can be emulated by other STEM stakeholders.

Pathways for Success

➤ Operate with Transparency and Accountability

Leverage and scale evidence-based practices across STEM communities.

Report participation rates of underrepresented groups.

Use common metrics to measure progress.

Make program performance and outcomes publically available.

Agency Participation

Pathways	Objectives	DOC	DoD	DOE	DHS	DOI	DOL	DOS	DOT	ED	EPA	HHS	NASA	NSF	SI	USDA
Develop and Enrich Strategic Partnerships	Foster STEM Ecosystems that Unite Communities	•		•	•	•	•	•	•	•	•	•	•	•	•	•
	Increase Work-Based Learning and Training through Educator-Employer Partnerships	•	•	•	•	•	•			•	•	•	•	•	•	•
	Blend Successful Practices from Across the Learning Landscape	•	•	•	•		•	•		•	•			•	•	•
Engage Students where Disciplines Converge	Advance Innovation and Entrepreneurship Education	•		•				•		•	•	•		•		•
	Make Mathematics a Magnet	•	•							•				•		•
	Encourage Transdisciplinary Learning	•	•	•	•	•		•		•	•	•	•	•	•	•
Build Computational Literacy	Promote Digital Literacy and Cyber Safety	•	•		•			•		•		•		•		•
	Make Computational Thinking An Integral Element of All Education	•	•	•	•	•				•		•		•	•	•
	Expand Digital Platforms for Teaching and Learning	•		•	•			•		•				•	•	•

Continuing an Administration Commitment

- The President established the **National Council for the American Worker** to develop a strategy to ensure American students and workers have access to the training and education they need.
- President Trump signed the reauthorization of the **Carl D. Perkins Career and Technical Education Act** to support career and technical education programs for American students.
- In June 2017, President Trump signed a presidential memorandum directing the **Department of Education** to make STEM and computer science education a top priority and set a goal of devoting at least **\$200 million per year toward STEM education**. In FY 2018, the Department spent \$279 million in discretionary STEM grants.
- The President signed the **INSPIRE Act** directing NASA to encourage women to study STEM and to pursue aerospace careers.
- President Trump signed legislation enabling the National Science Foundation to better support **women inventors**.

A Nationwide Call to Action



Learners, parents, educators, administrators, educational institutions, government officials, community and professional organizations, public and private sector employers...

The Strategic Plan is a “North Star” – a shared vision of opportunity and excellence for STEM Education.

IMPLICATIONS FOR OUR FIELD

- ▶ **STEM Literacy for All**
- ▶ **Diversity, Equity and Inclusion**
- ▶ **Workforce Development**
- ▶ **Computational Thinking**
- ▶ **STEM Ecosystem**
- ▶ **Accountability**
- ▶ **Focus on All Ages**
- ▶ **Beyond Single Visit**
- ▶ **Connection to Industry**
- ▶ **Moving Beyond Experience**
- ▶ **Partnership with Others**
- ▶ **Metrics Matter**

WHAT IS MISSING

- ▶ K-12 Education
- ▶ Pipeline Scientist Development
- ▶ Traditional Fields
- ▶ State and Local Issue
- ▶ Science Identity
- ▶ New Science v School Science

- ▶ **What are you doing at your science center that aligns with one of the areas in the strategic plan that could be scaled?**
- ▶ **What programs should exist with the federal government to support us in advancing the priorities states in the plan?**
- ▶ **How can we make the case to local, regional and state governments and funders to support our work in aligning with these national priorities?**

REPORT OUT