Federal STEM Education Strategic Plan: 2 Years Later

November 17, 2020

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Next STEM Webinar: New Frontiers in K-12 Computer Science Education, December 10, 2020, 1:30-3:00 PM ET

Presidential Cybersecurity Education Award – nominations due January 31, 2012

Parent and Family Digital Learning Guide

STEM Webpage www.ed.gov/STEM

STEM Newsletter www.ed.gov/subscriptions

ED Grants https://www2.ed.gov/fund/grants-apply.html


EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL
CHARTING A COURSE FOR SUCCESS:
AMERICA'S STRATEGY FOR STEM
EDUCATION

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

Build Strong Foundations for STEM Literacy

Prepare the STEM Workforce for the Future

Increase Diversity, Equity, and Inclusion in STEM

James Blew

Assistant Secretary for Planning, Evaluation and Policy Development, U.S. Department of Education

Cindy Hasselbring

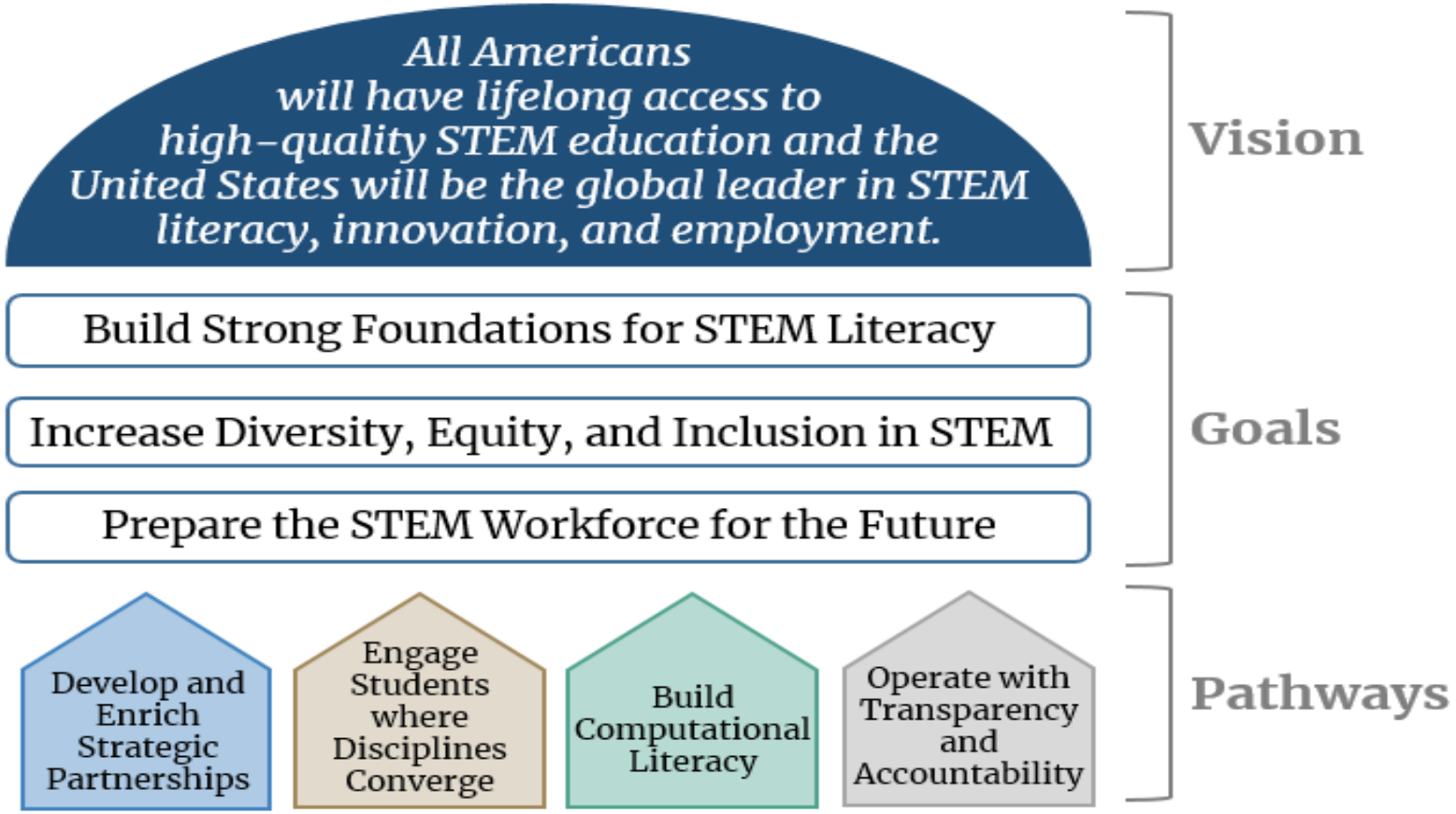
Senior Policy Advisor and Assistant Director of STEM Education, Office of Science and Technology Policy, Executive Office of the President

Federal STEM Education Strategic Plan Update
November 17, 2020

Office of Science and Technology Policy

www.whitehouse.gov/ostp
www.ostp.gov
@WHOSTP

Federal STEM Education Strategic Plan



STEM Education - An Interagency Effort

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

- Engage Students where Disciplines Converge

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

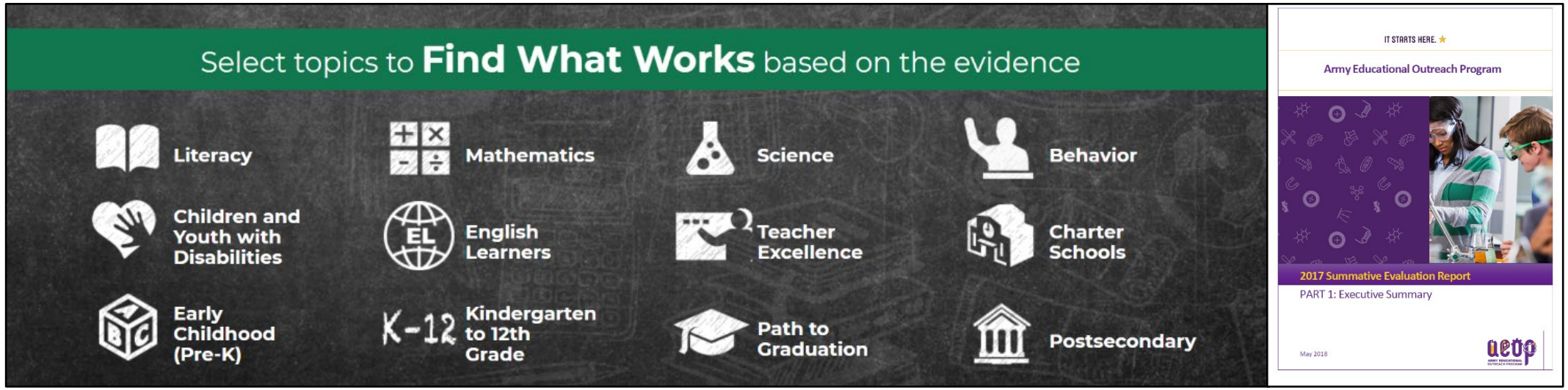
Pathways for Success

- Build Computational Literacy

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

Pathways for Success

- Operate with Transparency and Accountability



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

Federal STEM Education Opportunities and Resources

- **Federal STEM Education Request for Information** – deadline to submit responses November 20, 11:59 pm EST
- ***Charting a Course for the Nation's Success*** – Federal STEM Education Strategic Plan
- **Annual Federal STEM Education Progress Report**
- **Presidential Awards for Excellence in Mathematics and Science Teaching, Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring, Presidential Cybersecurity Education Award**
- **Albert Einstein Distinguished Educator Fellowship Program**
- **U.S. Dept. of Education Parent and Family Digital Learning Guide**

Susan Poland

Senior Analyst, Office of STEM Engagement, National Aeronautics and Space Administration

National Aeronautics and Space Administration

NASA's STEM Engagement Efforts Supporting CoSTEM's Strategic Plan

Susan Poland
FC-STEM Executive Secretary

Senior Analyst, Total Solutions, Inc.

INSPIRE - ENGAGE - EDUCATE - EMPLOY
The Next Generation of Explorers

NASA's STEM Engagement Enterprise

VISION

We immerse students in NASA's work, enhance STEM literacy, and inspire the next generation to explore.

MISSION

We engage students in NASA's mission

Strategic Goals

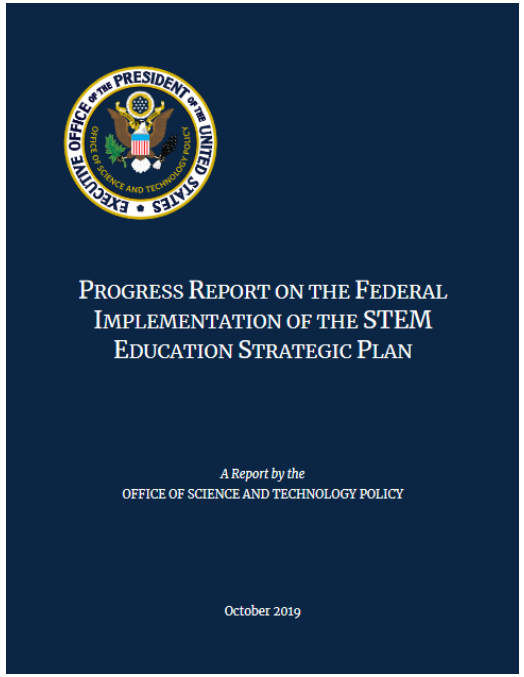
Create **unique opportunities** for a diverse set of students to contribute to NASA's work in exploration and discovery.

Build a **diverse future STEM workforce** by engaging students in authentic learning **experiences** with NASA's people, content and facilities.

Attract diverse groups of students to STEM through learning opportunities that **spark interest** and **provide connections** to NASA's mission and work.

NASA's STEM Engagement Investments

Office	Name of Investment
Office of STEM Engagement	Minority University Research and Education Project (MUREP)
Office of STEM Engagement	NextGen STEM (NGS)
Office of STEM Engagement	National Space Grant College and Fellowship Project (Space Grant)
Science Mission Directorate	GLOBE Program
Science Mission Directorate	Science Activation Program



NASA EXPRESS

Do you have family or friends looking for at-home ideas? Share this newsletter with them and ask them to subscribe.

Share Tweet Share

Visit NASA at SciFest Virtual Expo

Take a virtual field trip to the USA Science & Engineering Festival. The free event features educational resources and videos of NASA experts discussing various STEM topics.

STEM Webinars for Educators, Parents and Caregivers

Join the NASA STEM Engagement & Educator Professional Development Collaborative at Texas State University for live educational webinars.

NASA's Commercial Crew: Updates and Resources
Oct. 1 at 4:30 p.m. EDT

STEM Teaching Tips for Parents and Caregivers
Oct. 5 at 4:30 p.m. EDT

NASA's BEST: Engineering Design Process
Oct. 6 at 6 p.m. EDT

For a full list of upcoming webinars, click here.

'NASA STEM Stars' — Thermal Coatings Engineer Nithin Abraham
Audience: Students Ages 13+
Event Date: Oct. 7 at 2 p.m. EDT

"NASA STEM Stars" is a webchat series that connects students with subject matter experts to learn about STEM careers and ask questions about STEM topics.

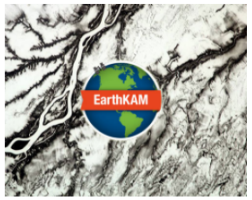
The Thermal Coatings Laboratory at NASA's Goddard Space Flight

More STEM Learning Resources

5, 4, 3, 2, 1 ... Blast Offline With Hands-on Activities for October
Audience: K-12 and Informal Educators, Parents and Caregivers

During October, take a break from screens and virtual learning with these five hands-on activities. Design a mission patch, help a drone navigate through a maze, carve a pumpkin like a NASA engineer and more.

Print the downloadable sheet and check your progress throughout the month.



Sally Ride EarthKAM Mission
Audience: K-12 and Informal Educators, Parents and Caregivers
Mission Dates: Through Oct. 2
Contact: https://www.earthkam.org/contact

Sally Ride EarthKAM is a free science, technology, engineering and mathematics (STEM) educational program managed by the U.S. Space & Rocket Center in Huntsville, Alabama. EarthKAM allows students to take images of Earth from space using a camera aboard the International Space Station. Use EarthKAM as a teaching tool to study subjects ranging from geography to art to meteorology. Visit the website for details and to register to participate.

Celebration of Station Science — October: Medical

Are You Up for a Challenge?

NASA's International Space Apps Challenge
Audience: Problem Solvers of All Ages
Event Date: Oct. 2-4

NASA's International Space Apps Challenge is an international hackathon for coders, scientists, designers, storytellers, space enthusiasts, innovators, students and teachers to engage with NASA's free and open data to address real-world problems on Earth and in space. This year's virtual event will focus on the theme "Take Action." Check out the Challenge Statements, including two challenges geared toward youth — "Create a Mascot" and "Sustaining Our Planet for Future Generations" — and see which one you want to do.

Register now to test your creativity and collaboration skills for a chance to see a rocket launch in the U.S. and present your ideas to NASA.

NASA MINDS Undergraduate Student Design Project
Audience: Faculty-led Student Teams Enrolled at Minority Serving Institutions
Application Deadline: Oct. 7
Contact: support@nasaminds.org

NASA's Minority University Research and Education Project (MUREP) Innovative New Designs for Space (MINDS) is a multisemester hands-on design and build experience. Faculty-led student teams from Minority Serving Institutions (MSIs) are challenged to design and build technologies needed for NASA's Artemis missions. Teams are allowed to focus on technologies that interest and inspire them the most

Subscribe to NASA EXPRESS:

nasa.gov/stem/express

INSPIRE - ENGAGE - EDUCATE - EMPLOY
The Next Generation of Explorers

Imagine leading a one-week expedition to the Moon's South Pole. Tell us about the astronauts in your Moon pod crew and the technology you would leave behind to help future explorers!

Open to K-12 Students in the U.S. – Full Challenge Details: http://go.nasa.gov/2Fr2s1t

CHALLENGE LAUNCH	ENTRIES CLOSE	SEMIFINALISTS ANNOUNCED	FINALISTS ANNOUNCED	FINALIST INTERVIEW	WINNERS ANNOUNCED
16 SEPTEMBER 2020	17 DECEMBER	17 MARCH	07 APRIL	29 APRIL	19 MAY 2021

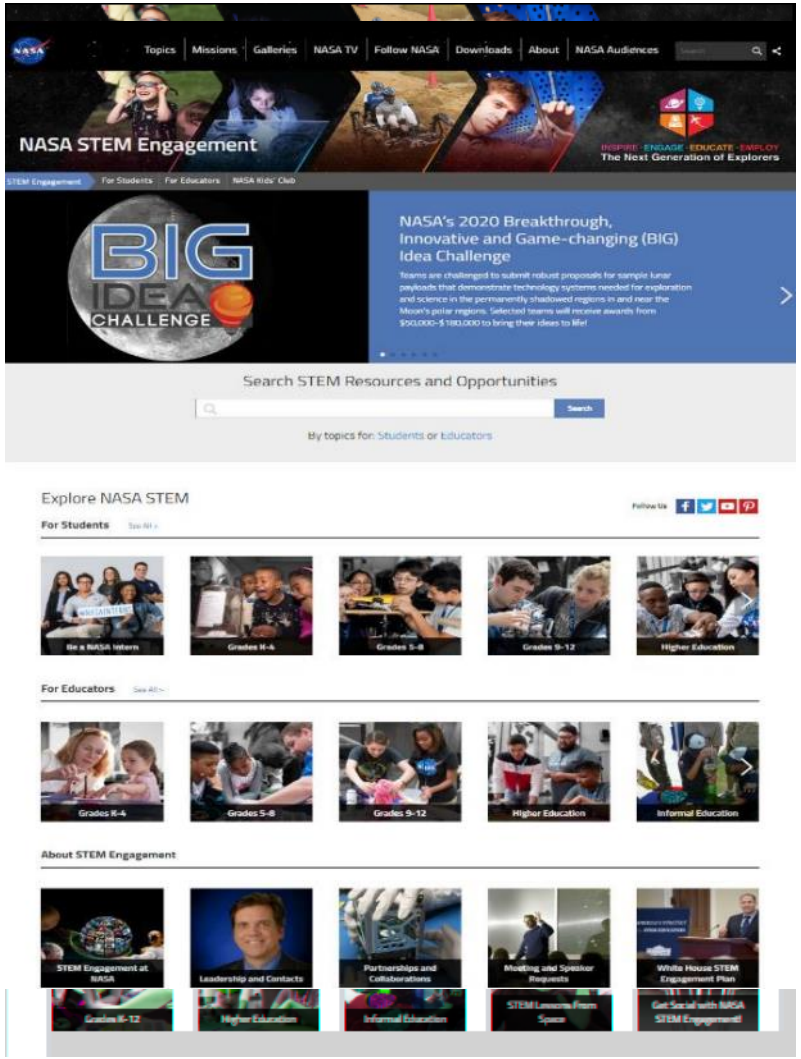
ENTER THE CONTEST OR SIGN UP TO JUDGE

156 Semifinalists will be invited to represent their state or territory in a series of **Artemis Explorer sessions** with NASA experts

Nine finalists will travel with a parent to **Johnson Space Center** to learn about **lunar exploration**

National winners in each grade division will receive a family trip to see the **first Artemis test flight** from **Kennedy Space Center**

NASA STEM ON THE WEB



stem.nasa.gov

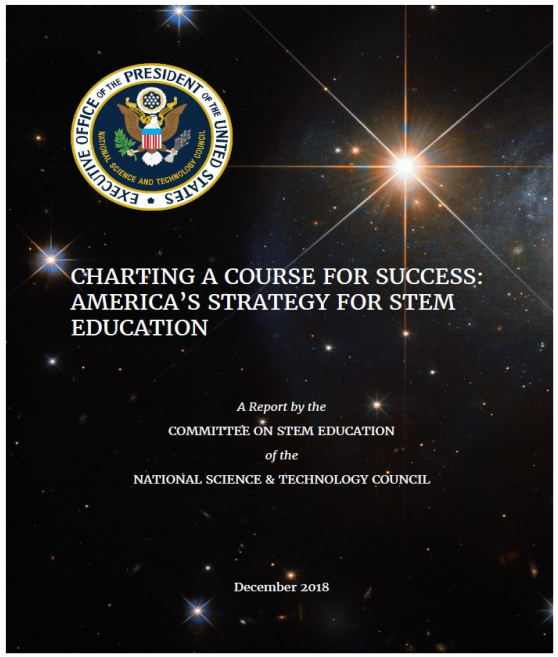
Implemented a New Website for NASA's STEM Engagement Enterprise

- **Overhauled website – stem.nasa.gov**
  - Allows students, educators and families to **more readily find opportunities to engage with NASA**
  - Users can **filter and sort content** based on audience, opportunities, date or location, grade, subject, and resource type
  - Existing content collections have also been **expanded to include topics for students**
- **Improved look, organization and navigation**
  - Allows content offerings to be sorted and grouped for **students and educators by grade appropriateness or by relevant themes or topics**

INCREASE DIVERSITY, EQUITY, & INCLUSION IN STEM

NASA's Efforts Toward Strategic Plan:

- MUREP INCLUDES, in support of the NSF INCLUDES initiative:
  - Supports broadening participation in engineering through collaborative approaches, while leveraging the talents of students and researchers at Minority-Serving Institutions (MSIs)
  - Planning grants were funded in August 2020; coalitions solicitation to be released in coming months
  - https://www.nasa.gov/stem/murep/includes.html
- Expansion of NASA Community College Aerospace Scholars (NCAS)
  - Gives community college STEM students an authentic NASA experience, and encourages them to finish a two-year degree or transfer to a four-year university to pursue a NASA-related field or career.
  - NCAS consists of a five-week online course (no credit) followed by a four-day engineering design workshop at a NASA center.
  - In 2019, 141 MSIs participated in NCAS, representing 40% of the nation's MSIs
  - https://www.nasa.gov/stem/murep/projects/ncas.html

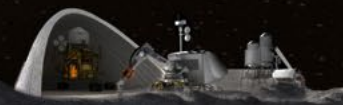


ARTEMIS STUDENT CHALLENGES

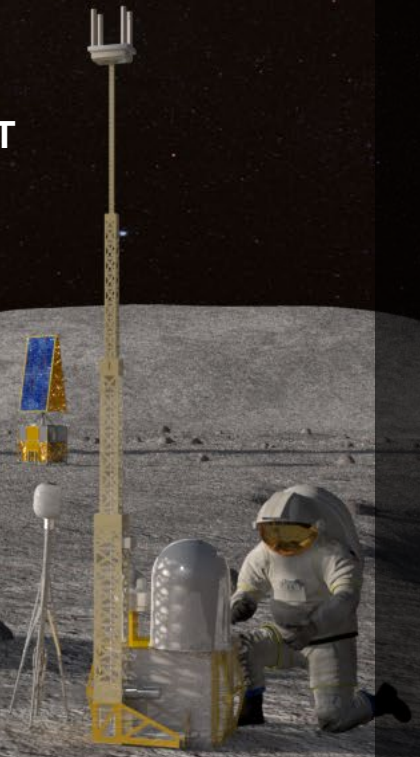
Human Exploration Rover Challenge

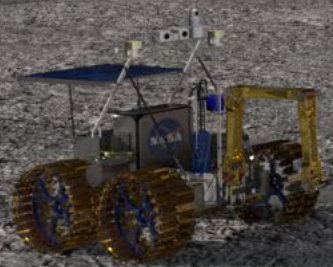
Student Launch

Micro-G NExT



2020 BIG Idea Challenge





Lunabotics Competition

Spacesuit User Interface Technologies for Students (S.U.I.T.S.)

First Nations Launch

Human Exploration Rover Challenge

Create a vehicle designed to traverse the simulated surface of another world

Micro-g NExT

Design, build and test a tool or device to address a current space exploration challenge

Spacesuit User Interface Technologies for Students

Design and create spacesuit information displays within an augmented reality environment

First Nations Launch

Build and launch class K high-powered rockets

Big Idea Challenge

Design lunar payloads that demonstrate technology systems needed for exploration and science

Student Launch

Research and compete and experience exploration to support the Space Launch System

Lunabotics

Build a robot to simulate an off-world lunar mining mission

ARTEMIS

stem.nasa.gov/artemis

NASA STEM Engagement Resources

STEM.NASA.GOV
Search for opportunities to engage with NASA based on specific filters
stem.nasa.gov

NASA EXPRESS Newsletter
Stay up-to-date on the latest NASA STEM Engagement resources and opportunities
nasa.gov/stem/express

NASA STEM@Home
Activities you can do together, from home
https://www.nasa.gov/stem-at-home-for-students-k-4.html
https://www.nasa.gov/stem-at-home-for-students-5-8.html
https://www.nasa.gov/stem-at-home-for-students-9-12.html

Artemis Student Challenges
Seven student challenges directly related to NASA missions.
stem.nasa.gov/artemis

Nafeesa Owens, Ph.D.

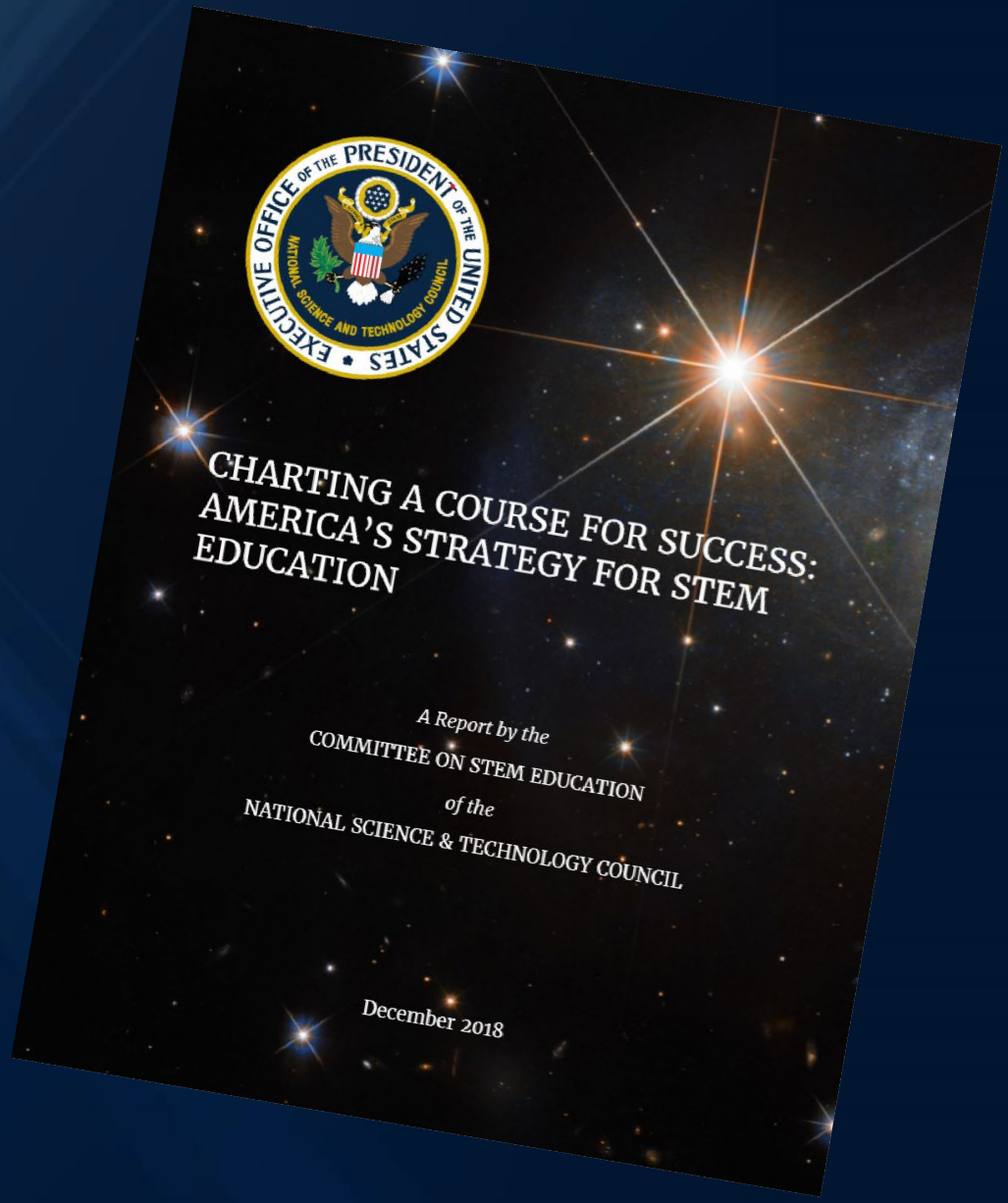
Program Director, Directorate for Education and Human Resources, National Science Foundation

Alignment and Support of the Federal STEM Education Strategic Plan

November 17, 2020

Three Aspirational Goals

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

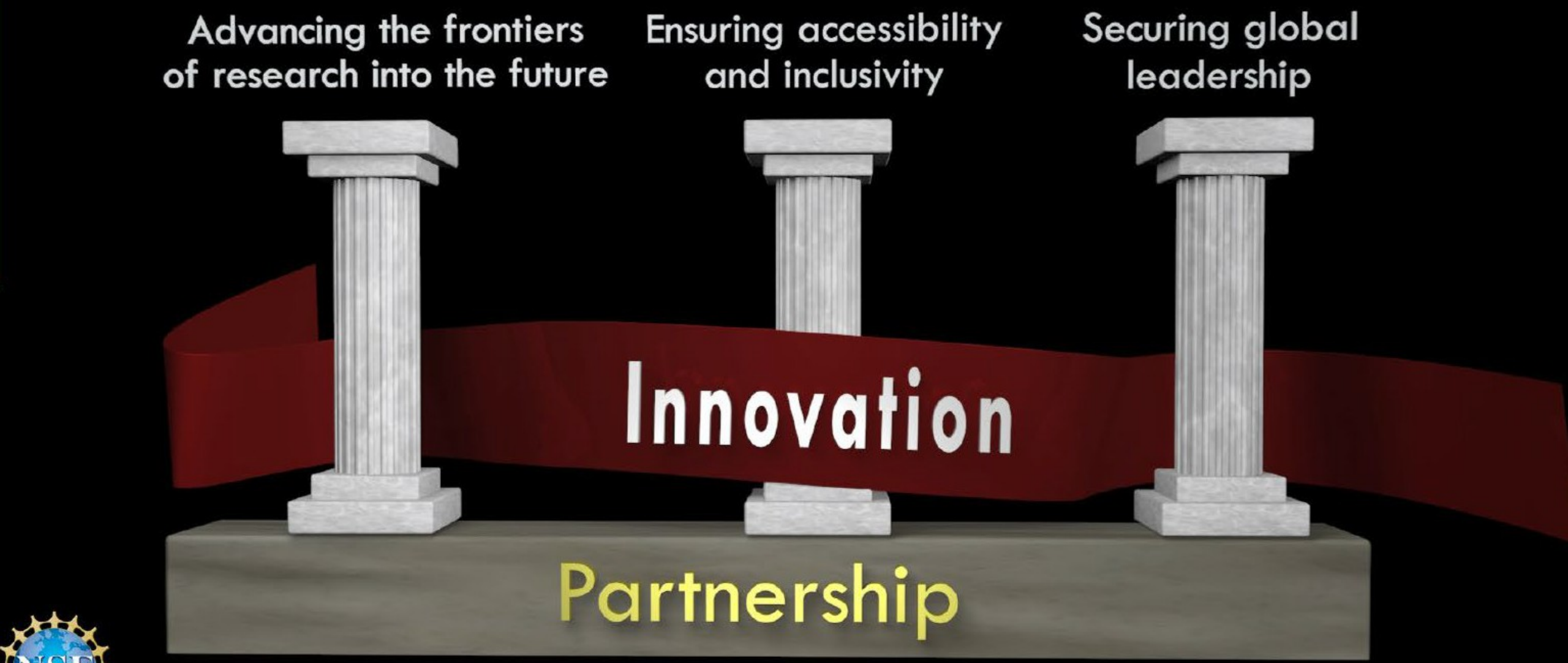


Federal STEM Education Strategic Plan (https://www.whitehouse.gov/wp-content/uploads/2018/12/STEM-Education-Strategic-Plan-2018.pdf)

"to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..."

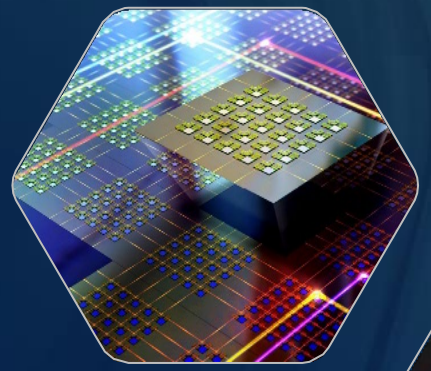
Dr. Sethuraman Panchanathan, Director, National Science Foundation
(https://www.nsf.gov/about/who.jsp)

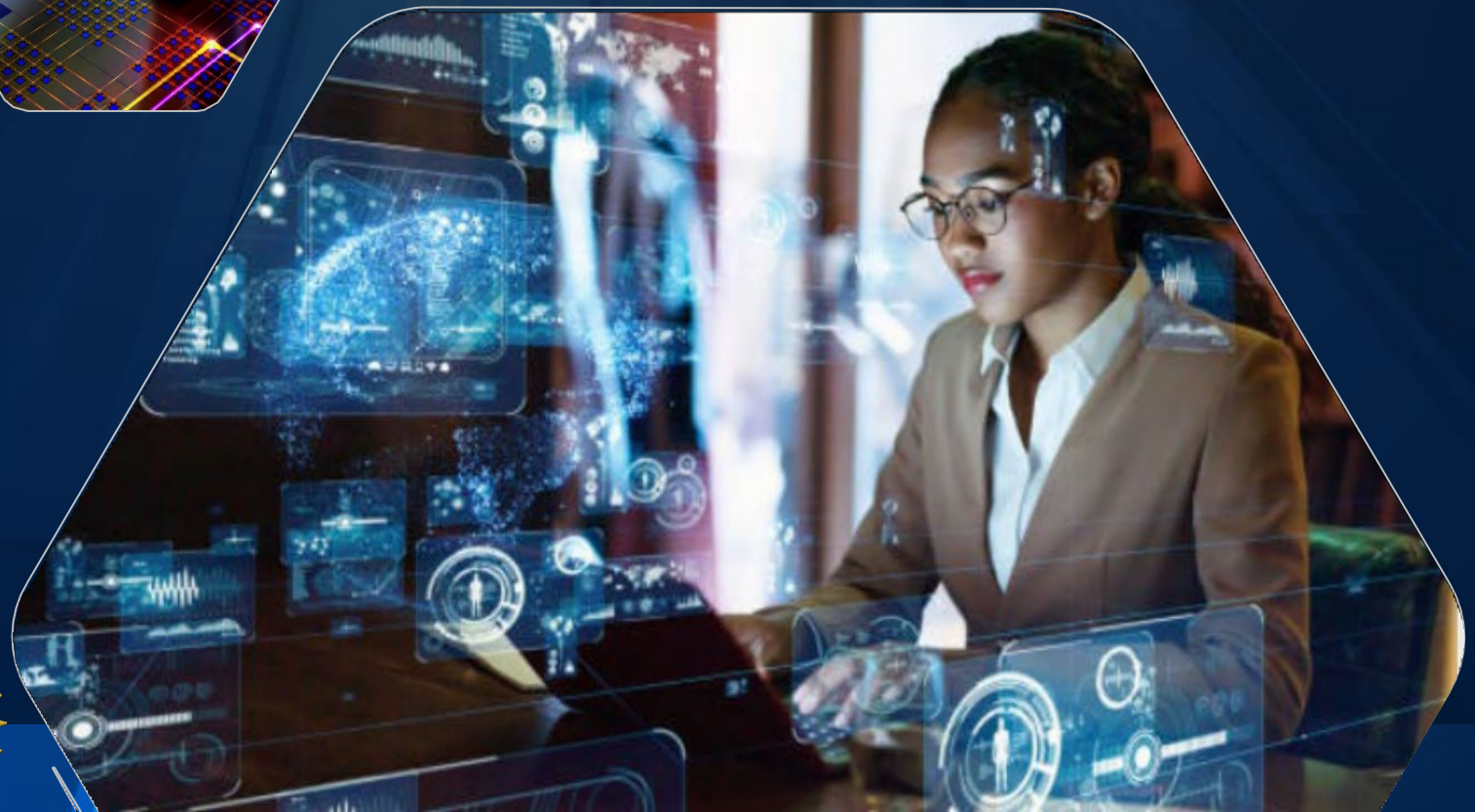
Vision


Advancing the frontiers of research into the future
Ensuring accessibility and inclusivity
Securing global leadership
Innovation
Partnership

4

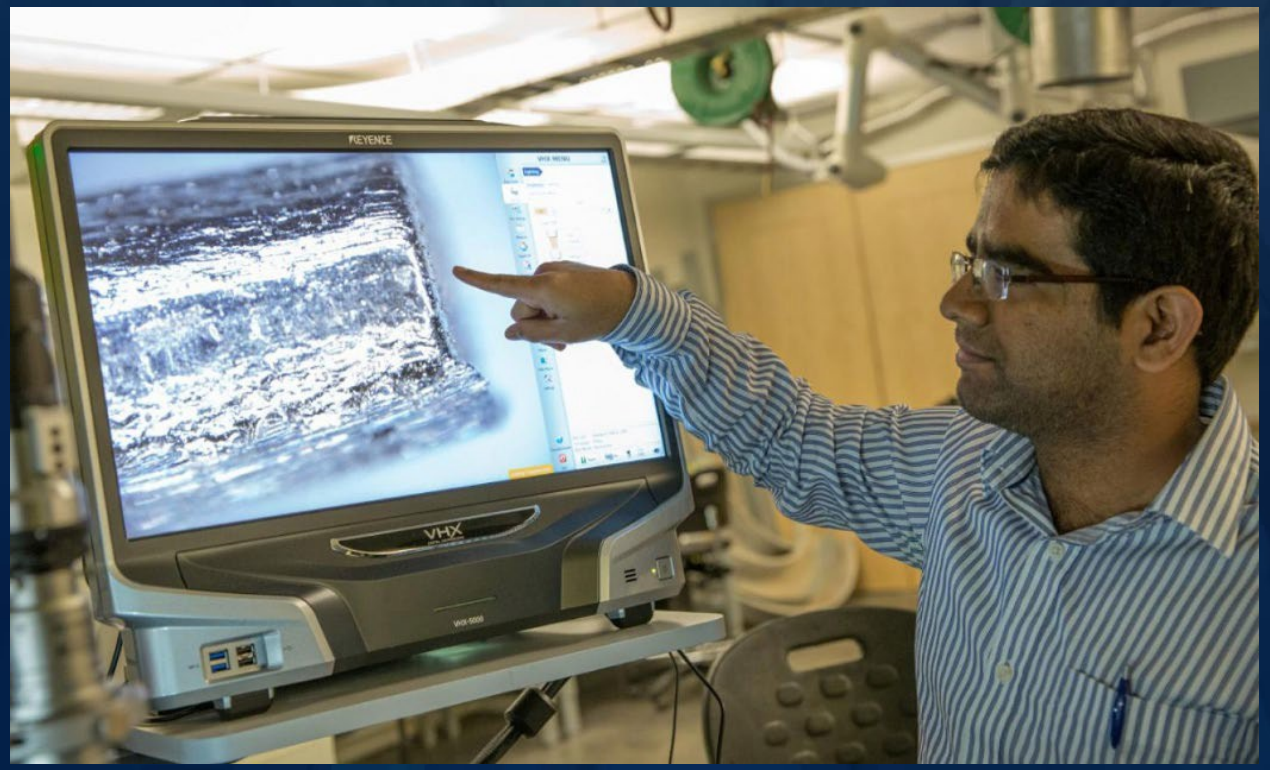
Advancing Digital Literacy and Data Science:
Harnessing the Data Revolution (HDR)

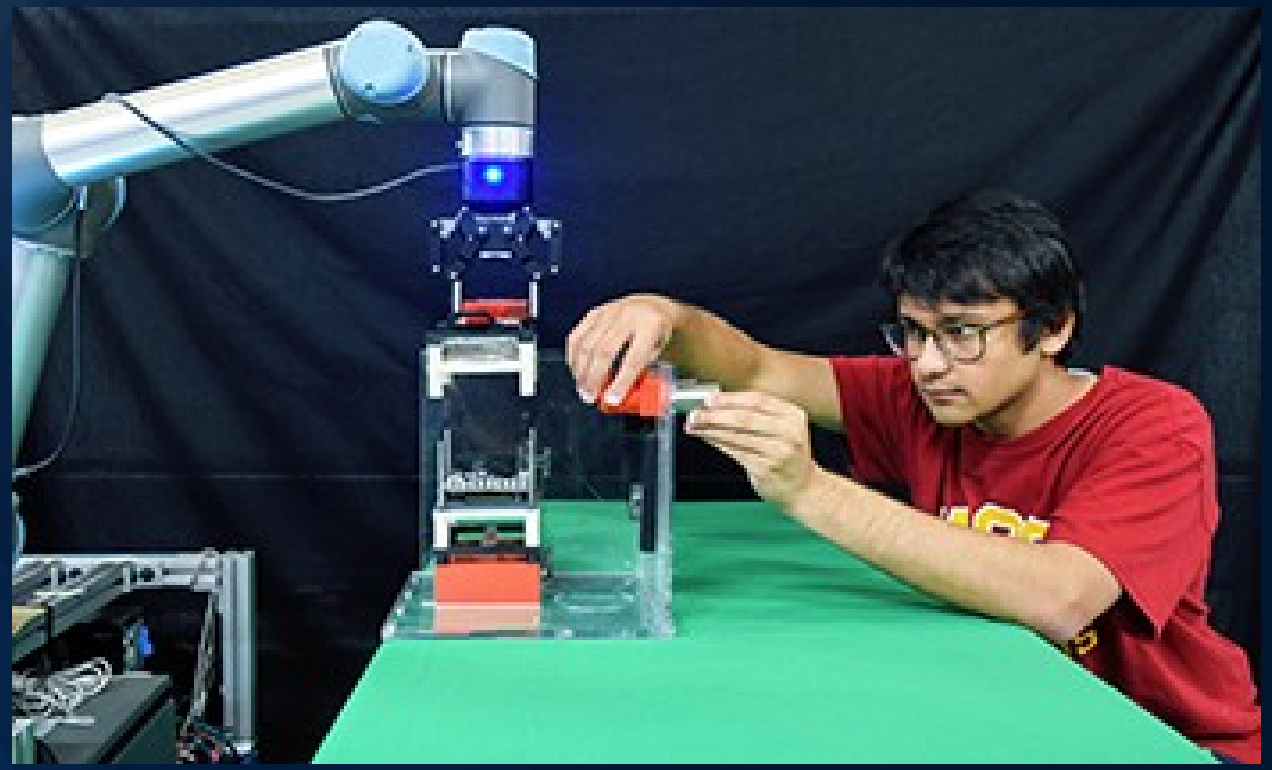




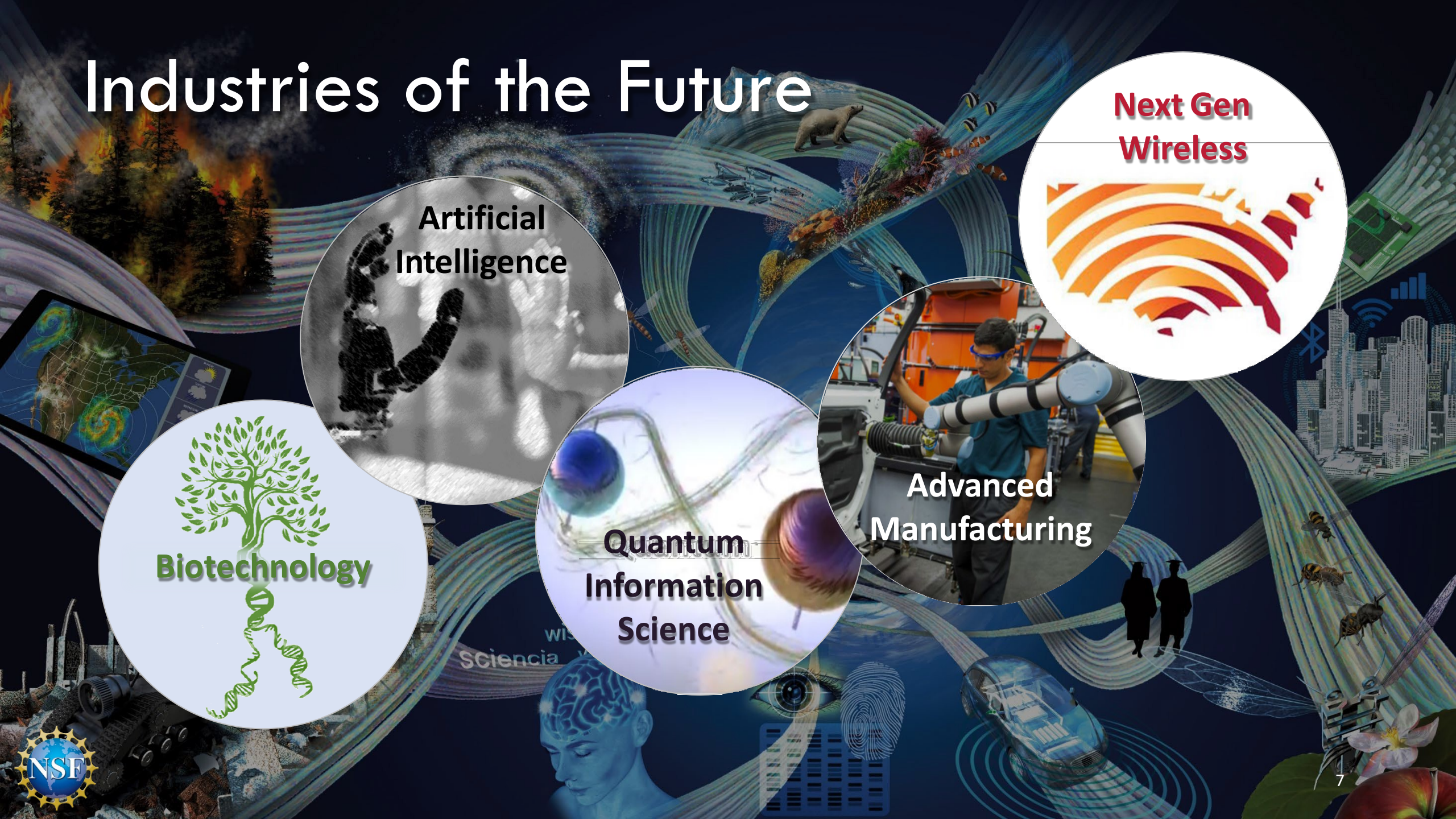
Investing in the STEM Workforce of the Future:

NSF - Boeing Partnership: Production Engineering Education and Research (PEER)





Industries of the Future

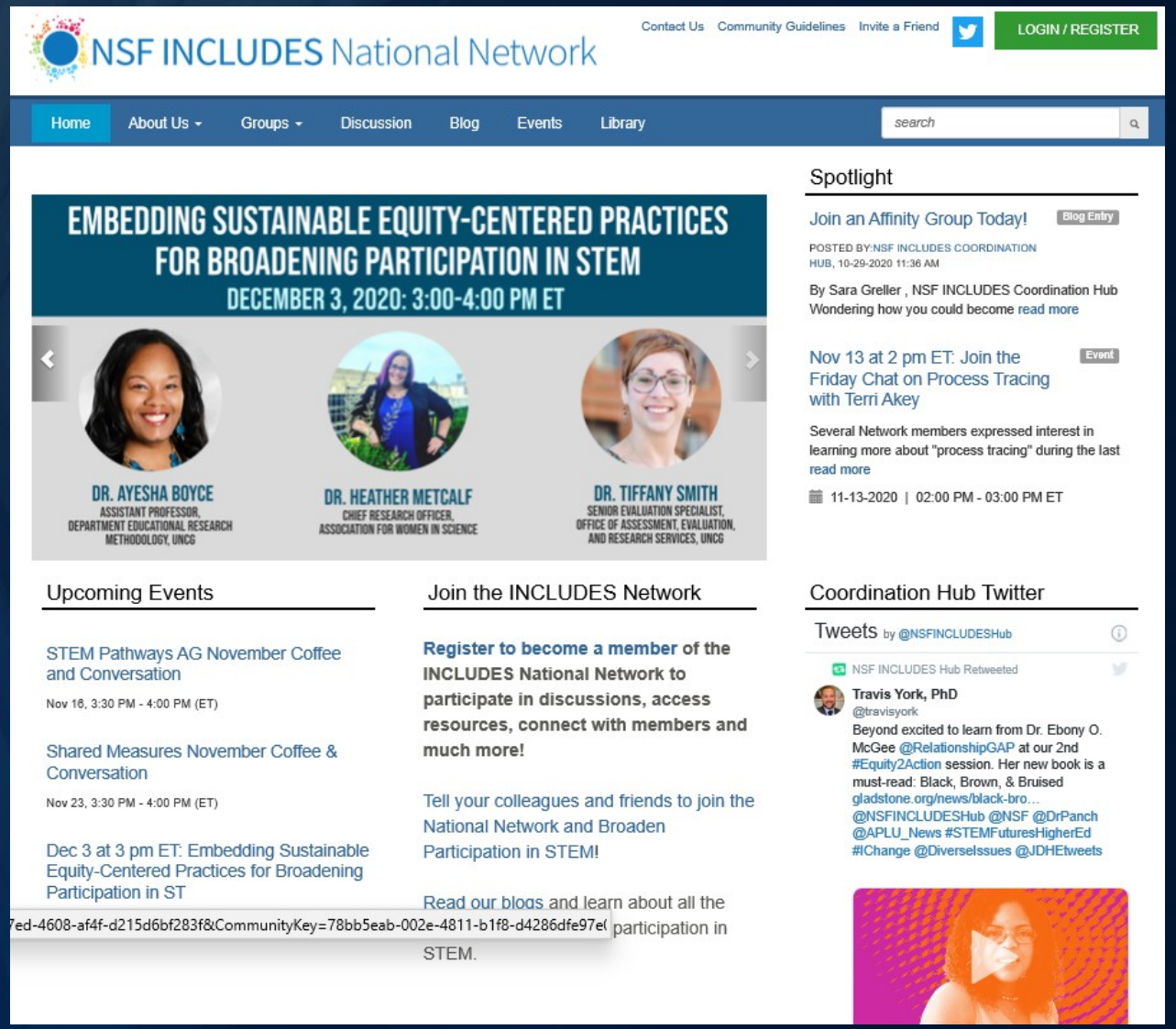


National Artificial Intelligence (AI) Research Institutes

Scaling Diversity, Inclusion, and Equity:

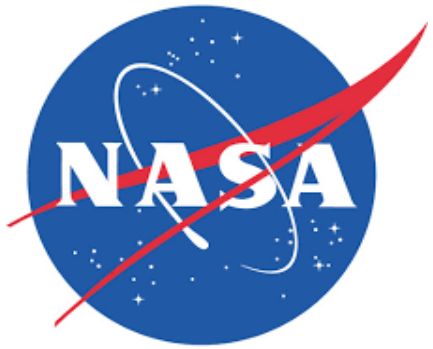
NSF Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES)

Report to the Nation II



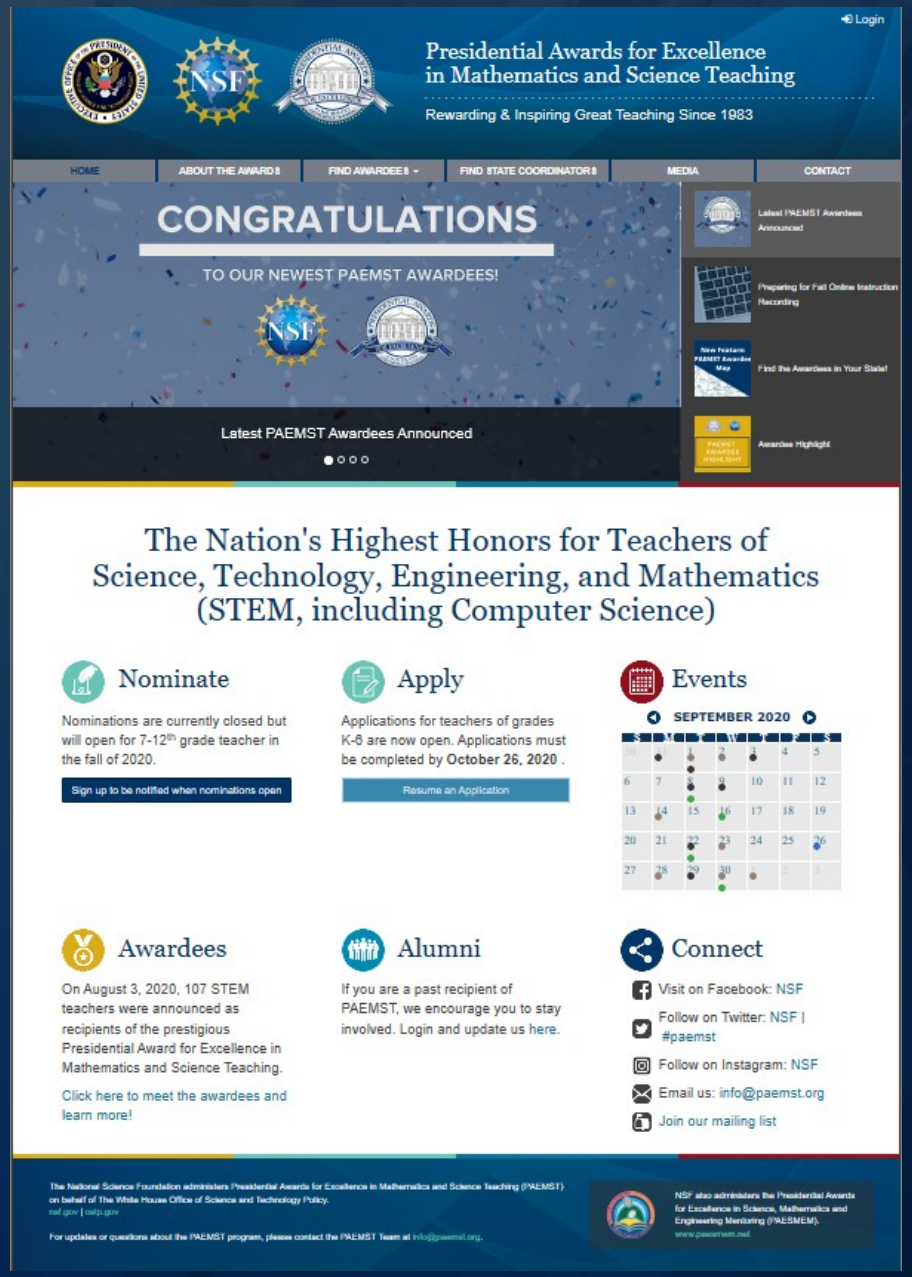
www.INCLUDESnetwork.org

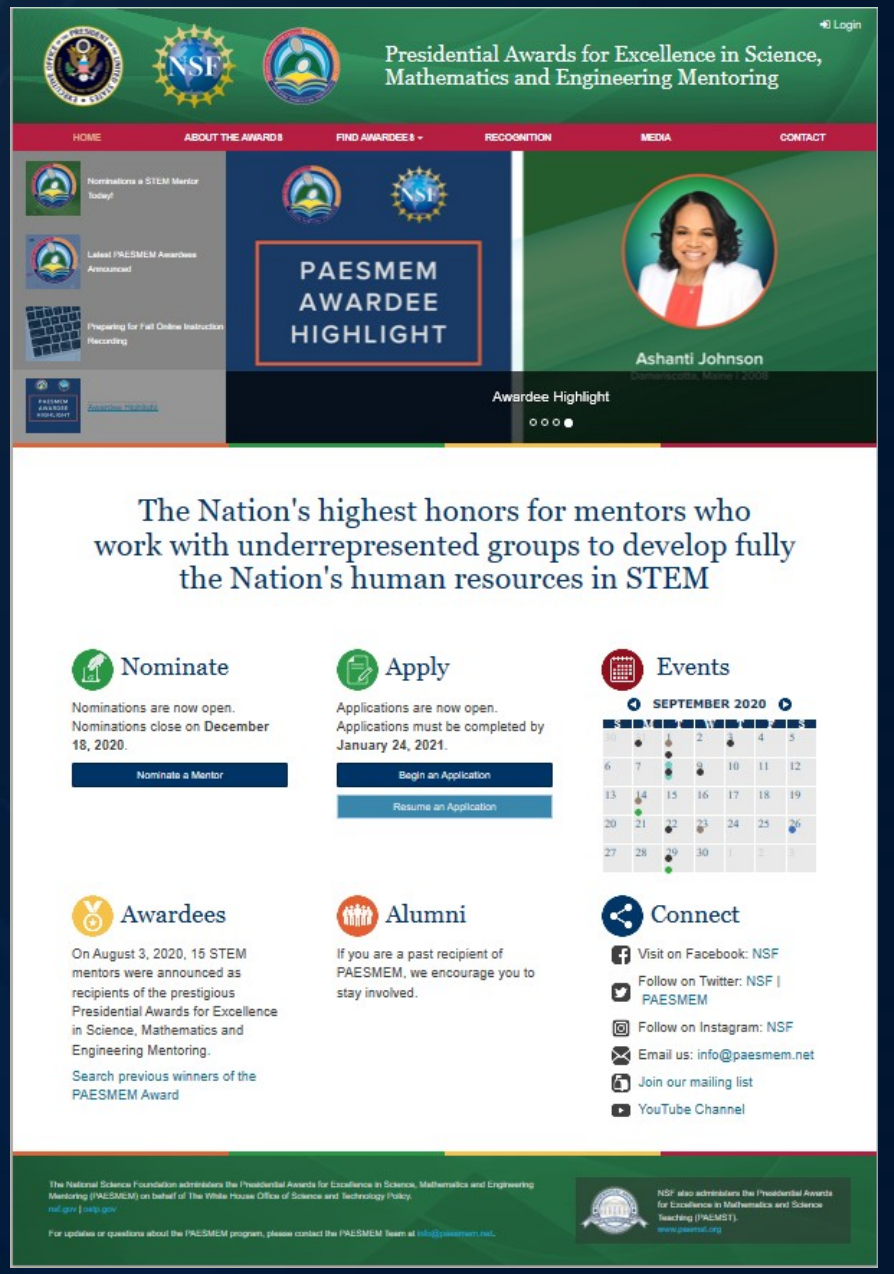
NSF INCLUDES Federal Partners



Excellence Awards in Science and Engineering (EASE)

Apply!
Nominate!





www.paemst.org

www.paesmem.org

SCIENCE MATTERS BLOG

5 NSF-supported STEM education resources that are perfect for virtual learning

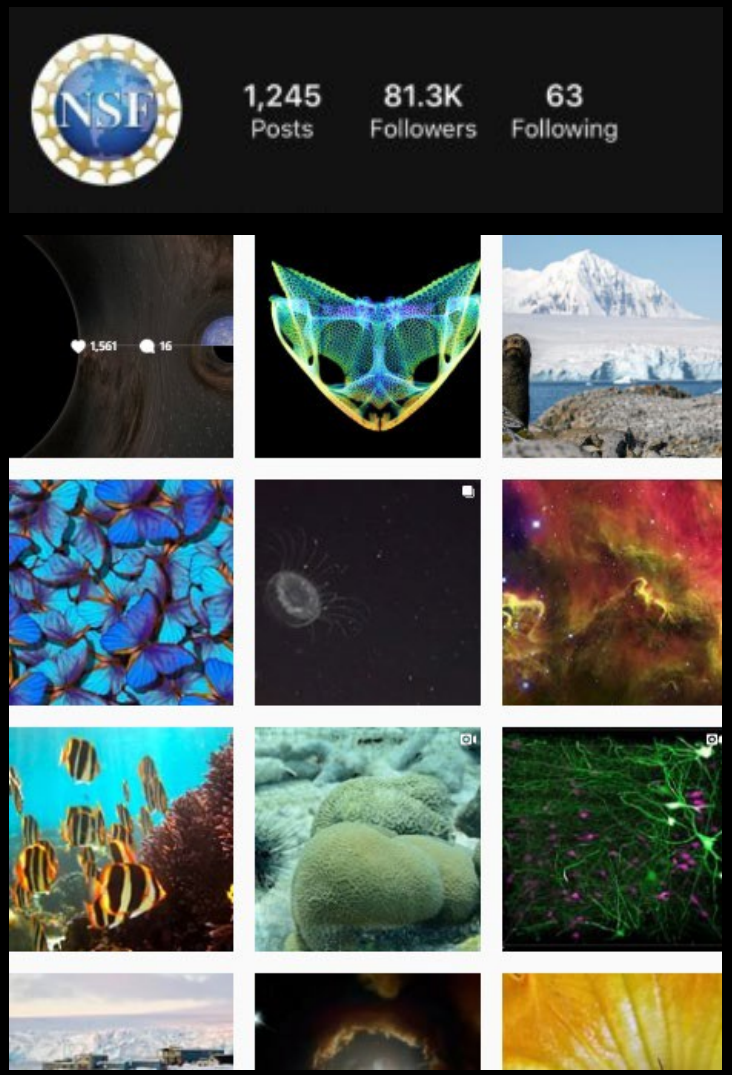
September 9, 2020

For many parents, teachers and students, back-to-school routines look a little different this year. Whether you're a teacher searching for lesson-planning content or a parent looking for activities to… Read More

- #NSFstories: What a magic school bus can teach us about science education
- When science meets art: 6 NSF research projects that turn STEM into STEAM
- 7 NSF-supported STEM resources that are perfect for at-home learning
- 7 ways to help your kids with math homework
- 7 NSF-funded museums and science centers offering virtual experiences to enjoy from your home
- 5 NSF-supported STEM education resources that are perfect for virtual learning

Mobile App: NSF SCIENCE ZONE

INSTAGRAM



Nafeesa Owens, Ph.D.

Thank You!

Louie Lopez

Director, DoD STEM, U.S. Department of Defense

Department of Defense

DoDSTEM

Science · Technology · Engineering · Mathematics





Program Overview

Louie R. Lopez, *Director, DoD STEM*

Defense Laboratories & Personnel Office

Office of the Under Secretary of Defense in Research & Engineering

Overview Agenda

- Federal STEM Alignment
- DoD STEM's K-20 Efforts
- DoD STEM's support of the Federal STEM Education Strategy
- Website Links and Resources

Aligned to the Federal STEM Education Strategy

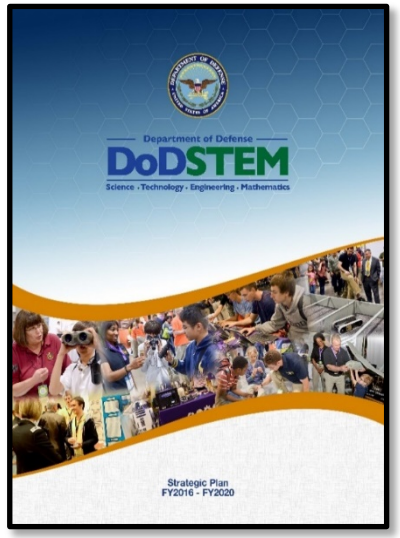
CURRENT DoD STEM STRATEGY

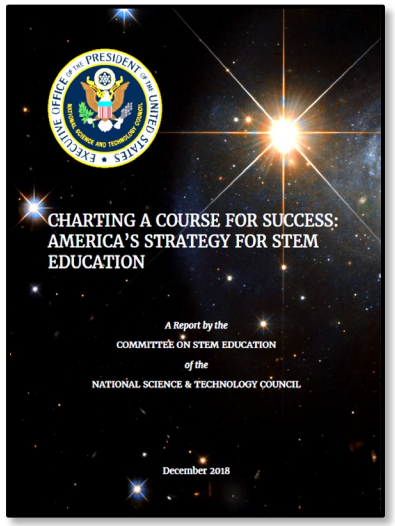
VISION: A STEM talent pool with minds for innovation, diversity of thought, and technical agility to sustain the Department's competitive edge.

MISSION: Attract, inspire, and develop exceptional STEM talent across the education continuum to enrich our current and future DoD workforce to meet defense technological challenges.

GOALS:

- **COMMUNICATE** the value and purpose of the DoD STEM Strategy and the need for engagement.
- **INSPIRE** youth and community engagement in K-12 STEM education and outreach by encouraging participation in DoD-sponsored STEM activities.
- **CULTIVATE** the future STEM talent pool through supporting and enhancing undergraduate and graduate students served by DoD-sponsored STEM programs.
- **PROMOTE** increased participation of underserved groups in STEM
- **ENHANCE** the efficiency and effectiveness of STEM initiatives by gathering evidence using a systematic approach.





AMERICA'S STRATEGY FOR STEM EDUCATION:

VISION: A future where 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.

GOAL: Build strong foundations for STEM literacy; increase Diversity, equity, and inclusion in STEM; and prepare the STEM workforce of the future.

Pathways To Achievement:

- **Develop and Enrich Strategic Partnerships.** Leverage partnerships with shared mission from academia, industry, and communities.
- **Engage students where disciplines converge.** Promote innovation and entrepreneurship in transdisciplinary activities & integrate math learning across disciplines.
- **Build Computational Literacy.** Empower learners through activities that promote digital literacy and computational thinking.
- **Operate with Transparency and Accountability.** Evidence-based practices and decision-making.

DoD STEM K-20 Efforts

- **K-12**
  - Student enrichment activities (year-round and summer STEM camps)
  - Student Competitions
  - Paid apprenticeships/internships
  - Teacher professional development & externships
- **Post-secondary**
  - Paid apprenticeships/internships
  - Scholarships
  - DoD Scientists/Engineer in the Classroom or Faculty Exchange
  - Fellowships

DoD Components that Support STEM

- U.S. Army – Office of the Deputy Assistant Secretary of the Army for Research & Technology
- U.S. Navy & Marine Corps – Office of Naval Research
- U.S. Air Force – Office of the Secretary of the Air Force in Acquisition, Technology, and Logistics & Air Force Research Laboratory
- Missile Defense Agency
- Defense Threat Reduction Agency
- National Security Agency
- DoD Educational Activity
- Office of Civil and Military Affairs (JROTC)

Leveraging the DoD's 300K STEM Professionals, 63 Defense Laboratories in ~200 Locations across the U.S. to engage in STEM activities that help develop the Nation's STEM talent now and into the future

Plan Goal: Build Strong Foundations of STEM Literacy

- **Defense STEM Education Consortium (DSEC)**
- Army, Navy and Air Force – Junior Science & Humanities Symposium (JSHS)
- Army Educational Outreach Program (AEOP)
  - Gains in the Education of Math & Science (GEMS)
  - eCYBERMISSION
- Naval STEM - Naval Science Awards Program (NSAP)
- Air Force LEGACY Program
- Air Force Cyber Patriot
- Joint Science & Technology Institute (JSTI)
- STARBASE Program
- Air Force Team Rocketry Program
- MDA STEM Initiatives

DSEC *is a collaborative partnership between academia, industry, non-for-profit organizations and government that aims to broaden STEM literacy and develop a diverse and agile workforce with the technical excellence to defend our Nation.*

- DoD STEM launched DSEC in March 1, 2019
- Consortium model approach to STEM education under a cooperative agreement award of up to $75M / 5 years
- 18 Partner organizations led by RTI International
- STEM education and outreach activities across the K-16 continuum
  - **Engage** students in meaningful STEM experiences
  - **Serve** military connected and underserved/underrepresented students
  - **Connect** to the DoD STEM Workforce
  - **Leverage** the network as a force multiplier
  - **Evolve** the approach based on data
- **9** of **18 DSEC Partners** provide teacher professional development
- *NEW* **DoD STEM Ambassadors** for Teachers Initiative AUG 2020

Plan Goal: Increase Diversity, Equity, and Inclusion in STEM

- AEOP Research Engineering Apprenticeship Program (REAP)
- AEOP Unite Program
- STARBASE Program
- Defense STEM Education Consortium (DSEC)
  - FIRST Robotics
  - National Math & Science Initiative (NMSI) College Readiness Program
  - ASU CGEST
- DoD HBCU/MI Program (Student Internship & Faculty Fellowship Program)
- National Defense Education Program (NDEP) – STEM Grants

DSEC

- *FIRST Robotics* ~50% of student teams sponsored by DoD STEM are military connected students; In FY20, DoD sponsored 1,600+ teams in Jr. FLL, FLL, FRC and FTC, with about
- NMSI *College Readiness Program* works predominantly with military connected and Title I schools across the country encouraging high school students to take AP courses and exam, and provide teacher development; 2020: 2,196 teachers and 19,017 students
- Arizona State University's Center for Gender Equity in Science and Technology – CompuGirls Cybersecurity Warriors Program

STARBASE

- *"hands-on, minds-on"* STEM activities for 5th graders; Work predominantly with Title I schools near military installations, serving students that are historically underrepresented in STEM; ~80,000 annual participants across 70 program sites in the U.S.

AEOP

- *REAP* is a paid apprenticeship program for high school students at partner universities exclusively for underserved populations; >95% of annual participants are from underserved populations
- *Unite* is a 3-6 week summer enrichment program for high school students in partnership with universities across the country; ~95% of annual participants come from underserved populations

Plan Goal: Prepare the STEM Workforce for the Future

- **DoD Science Mathematics and Research Transformation (SMART)**
- National Defense Science & Engineering Grant Fellowship (NDSEG)
- Science & Engineering Apprenticeship program (SEAP -Army & Navy)
- AEOP College Qualified Leaders (CQL)
- Naval Research Enterprise Internship Program (NREIP)
- Air Force Research Laboratory Scholars Program
- DoD Information Assurance Scholarship Program
- Air Force PALACE Acquire Program
- High School & Undergraduate Research Apprenticeship Programs (HSAP & URAP)
- National Security Agency Computer Science Intern Program (CSIP)
- Manufacturing Engineering Education Program (MEEP)

What is the SMART Scholarship: a scholarship for service program which enhances the Department's STEM workforce through support of students' undergraduate and graduate STEM educational degrees.

- 3,076 Scholarships awarded since 2006
- 91% success rate of service commitment completion
- 206 DoD sponsoring laboratories & agencies across 40 states
- 410 Universities represented by SMART scholars
- 21 STEM Disciplines
- 2,202 Graduated Scholars

What do SMART Scholars Receive?

- Full Tuition and Related Education Expenses
- Cash award paid at a rate of $25,000-$38,000 per year
- Book Allowance & Health Insurance
- Summer Internship(s)
- Post-graduation Employment

DoD STEM Links & Resources

- DoD STEM Website – DoDSTEM.us
- DoD STEM Email - info@dodstem.us
- DoD STEM Teacher Resources: Online learning opportunities provided by members of the Defense STEM Education Consortium (DSEC), and DoD Components such as the Army, Navy, and Air Force
- Defense STEM Education Consortium Annual Program Report 2019-2020
- Future DoD STEM Grant Opportunities will be broadcasted on our website and social media channels

Follow us on Social Media:

Twitter - @DoDSTEM, @SMART_DoD

LinkedIn – SMART Scholarship

Instagram - @DoDSTEM, @smart_dod

YouTube – DoD STEM, DoD SMART Scholarship

Jean Morrow

STEM Lead and Policy Advisor, Office of Planning, Evaluation and Policy Development, U.S. Department of Education

U.S. Department of Education

Science, Technology, Engineering and Mathematics (STEM)

November 18, 2020

STEM at ED – Today's Overview

- ED's support of Federal STEM Education 5 –Year Strategic Plan
- ED's support and efforts concerning STEM
- Opportunities and resources available

GOALS FOR AMERICAN STEM EDUCATION

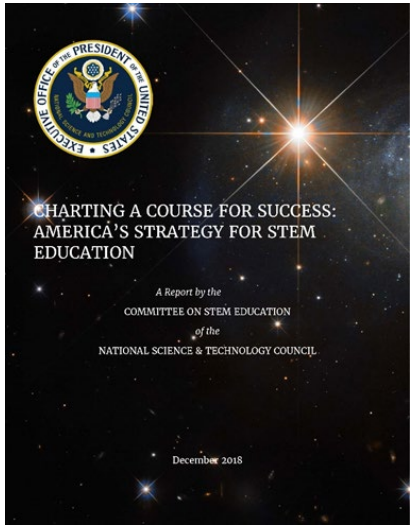
★ Build Strong Foundations for STEM Literacy ★

★ Increase Diversity, Equity, and Inclusion in STEM ★

★ Prepare the STEM Workforce for the Future ★

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	●		●	●			●		●				●	●	●

Goal 4: The Federal agencies collectively plan to **Operate with Transparency and Accountability.**



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

ED's support and efforts concerning STEM

- STEM is a centerpiece of Secretary DeVos' comprehensive education agenda.
- ED's Internal STEM Strategy: 3-prong approach
  - Grants, Inter-agency Initiatives, and Communications
- Rethink School Initiative
  - "Opening Multiple Pathways" Alongside; Improving K-12 Outcomes; and Supporting Students after High School

Offices that Support STEM

- Office of Planning, Evaluation and Policy Development (OPEPD)
- Office of Career, Adult, and Technical Education (OCTAE)
- Office of Elementary and Secondary Education (OESE)
- Office of Special Education and Rehabilitative Services (OSERS)
- Office of Postsecondary Education (OPE)
- Office of Educational Technology (OET)
- Institute of Educational Sciences (IES)
- Office of English Language Acquisition (OELA)
- Institute of Educational Sciences (IES)
- White House Initiatives
- Federal Student Aid (FSA)
- Office of Communications and Outreach (OCO)

Plan Goal: Build Strong Foundations in STEM Literacy

- **Education Innovation and Research Program**
  - Statute: Elementary and Secondary Education Act (ESEA), as amended by Every Student Succeeds Act (ESSA)
  - There are three types of grants under this program:
    - "Early-phase" grants, "Mid-phase" grants, and "Expansion" grants
- Aims of the program:
  - Implement practices that are designed to create, develop, implement, replicate, or take to scale entrepreneurial, evidence-based, field-initiated innovations to improve academic achievement for high-need students
  - Benefit all students, especially high-need students
- Past support: FY18 and FY19
- Grantee Examples: here (FY20 announced later this year)
- Where to go to find information: Program websites here and here
- Contact info: EIR@ed.gov

Plan Goal: Increase Diversity, Equity, and Inclusion in STEM

- **Minority Science Engineering Improvement Program (MSEIP)**
  - Statute: Higher Education Act (HEA)
- Aims of the program:
  - This program assists predominantly minority institutions in effecting long-range improvement in science and engineering education programs and increasing the flow of underrepresented ethnic minorities, particularly minority women, into science and engineering careers
  - Supports building the capacity of minority institutions in STEM disciplines
- Past support: here and here
- Grantee Examples: here
- Where to go to find information: program's website here
- Contact info: Bernadette.Hence@ed.gov

Plan Goal: Prepare the STEM Workforce for the Future (and the Now)

- **Innovation and Modernization Program**
  - Statute: Perkins V
- Aims of the program:
  - Identify, support, and rigorously evaluate evidence-based and innovative strategies and activities to improve and modernize career and technical education (CTE)
  - Ensure workforce skills taught in CTE programs funded under the Perkins statute align with labor market needs
- Past support: here
- Grantee Examples: here
- Where to go to find information: program's website here
- Contact info: Jenny.Lambert@ed.gov or Robin.Utz@ed.gov

ED Resources

- **Funding**
  - Discretionary, Formula, Federal Student Aid, and Research
  - 2018 Funding and 2019 Funding
- **Grantee Resources**
  - New potential grantee toolkits (here and here)
  - Peer reviewer – How to Be Considered as a Peer Reviewer
  - Forecast of Funding
  - Set up alerts on www.grants.gov
- **Knowledge**
  - College Scorecard
  - Exploring Career Options – FSA
  - GreatSchools.org
  - OET's Rural broadband connectivity work
- **Data**
  - IES data and statistics, research and evaluation, and tools for educators
  - STEM Data Story
  - CTE Data Story
  - Civil Rights Data Collection
- **Tools and Project Ideas**
  - STEM Spotlights
  - ESSA, IDEA, Perkins Resources
  - OCTAE tool-kits
  - Apprenticeships
  - What Works Clearinghouse Practice Guides and Intervention Reports
  - K-12 Practitioner's Circle
  - STEMIE
  - Out of School
  - CTE Research Center
  - Parent and Family Digital Learning Guide
  - Presidential Cybersecurity Education Award
- **Communications**
  - Ed.gov/STEM
  - Newsletter Subscriptions – STEM Newsletter
  - Twitter – ED and Secretary's accounts
  - STEM webpage
  - STEM Briefing Series
  - Homeroom Blog
  - Press Releases
  - Early Learning: STEM – Math Video
- **Federal Collaboration**
  - Federal Partnerships
  - STEM Education Advisory Panel

Contact Information

- Jean Morrow, STEM Lead and Policy Advisor, Office of Planning, Evaluation, and Policy Development (OPEPD)
- Jean.Morrow@ed.gov
- https://www.ed.gov/STEM
- STEM Newsletter

An Interagency Process – some links to STEM pages

DISCUSSION

QUESTIONS

ANSWERS

CONCLUSION