



# NAC STEM Engagement Committee Meeting

A group of five diverse young women are posing outdoors, likely at an airport or airfield. They are wearing light blue t-shirts with the NASA logo. One woman in the foreground has her arm raised, and another in the background is making a peace sign. The background shows a blurred aircraft and a clear sky.

# NASA STEM

# Agenda



## 10:00 AM Welcome & Introductions

- 10:15 AM NASA STEM Engagement Updates
- 10:45 AM Aeronautics Research Mission Directorate – STEM Engagement Update
- 11:00 AM Partnerships (Priority Area 2)
- 11:30 AM Break (10 minutes)
- 11:40 AM STEM Gateway (Priority Area 3)
- 12:30 PM Lunch
- 1:00 PM STEM Impacts (Priority Area 4)
- 1:30 PM Generation of Findings and Recommendations
- 3:00 PM Adjourn Meeting





**Welcome!**

# NAC STEM Engagement Committee Members



## **Dan Dumbacher (Chair)**

Executive Director, American Institute of Aeronautics and Astronautics

## **Darryl Williams, PhD**

Senior Vice President of Science and Education, The Franklin Institute

## **Julia Ross, PhD**

Dean, Virginia Tech's College of Engineering

## **Erika Shugart, PhD**

Executive Director, National Science Teacher Association

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## *New Members*

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## **Juan Amador**

Executive Director, SACNAS

## **Jo Webber, Ph.D.**

Founder and CEO of Pod and President of STEMconnector

## **Ron Ottinger**

Executive Director, STEM Next Opportunity Fund

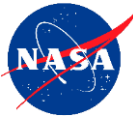


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# STEM Engagement Board Transition

To align with NPD 1400.1, and improve agency governance function, NASA's STEM Engagement Council was asked to become NASA's *STEM Engagement Board*.

## Agency “Board” Guidance:

- **Decisional** body
- Heavily focused on **policy**, with board receiving updates on implementation
- Membership: **Senior-level representatives, who are authorized to make decisions** on behalf of their organization (e.g., Deputy AA level from MDs)



# NASA STEM Engagement Strategic Direction



## NASA Strategic Objective 4.3

Build the next generation of explorers.  
Engage students to build a diverse future  
STEM workforce.



### Priority Areas



- Advance diversity, equity, inclusion, accessibility, and belonging in opportunities to **broaden participation** in STEM.
- Build and strengthen **strategic partnerships and networks**.
- Create a **beneficiary-focused organizational framework** of opportunities and resources.
- Facilitate **evidence-driven, continuous improvement** of NASA's STEM engagement portfolio to ensure opportunities are responsive to evolving beneficiary needs.



Questions about  
the report  
or NASA's  
responses?

## NASA

Office of Inspector General



### Audit of NASA's Science, Technology, Engineering, and Math Engagement



April 25, 2024

IG-24-010



Read the entire  
report [here](#) or  
scan the QR  
code.



**NASA STEM** INSPIRE - ENGAGE - EDUCATE - EMPLOY  
The Next Generation of Explorers



stem.nasa.gov



## To the AA for STEM Engagement

1. **Re-evaluate the OSTEM performance goals** to ensure they are distinct and well correlated with outcomes.
  - We concurred.
  - Will be re-evaluated during the next NASA Strategic Plan cycle. Meanwhile, will continue to work closely with OCFO on the development of appropriate annual performance measures.
  - Estimated completion: February 2026 or concurrent with FY27 President's Budget rollout in March 2026.
2. Develop a procedure to ensure **OSTEM tracks and reports funding** for all Agency STEM engagement activities.
  - We concurred.
  - We will use the soon-to-be-established STEM Board to consider this recommendation, identifying appropriate guidelines, thresholds, and scope tracking and reporting funding.
  - Estimated completion date: Guidance memo from the STEM Board by December 31, 2024



## To the AA for STEM Engagement

3. **Apply relevant NASA project management policy requirements** to existing project plans or record their exclusion and appropriately address budget risk in project plans, including planning for various funding scenarios.
  - We concurred.
  - Will update/revise existing program and project plans for OSTEM: Space Grant, MUREP, EPSCoR and NextGen STEM
  - Estimated completion date: July 30, 2024
  
4. Develop a **standardized grant process** that ensures mandatory performance reporting and that expiration dates are tracked and monitored to meet requirements and develop practices to ensure grant recipients are **reporting subrecipient awards over \$30,000** as required.
  - We concurred.
  - We'll work with NSSC to accomplish this. Grants Manager will lead the effort.
  - Estimated completion date: September 30, 2024



# Audit Recommendations 5 and 6



## To the Administrator

5. **Re-evaluate the EPSCoR jurisdictions** to ensure effective and equitable distribution of Agency funds.
  - We concurred.
  - We will conduct an analysis of the jurisdiction award data in comparison to the findings of the OIG audit team and consult with OGC, OLIA, and OCFO to consider their advice about the law to determine whether a NASA-unique eligibility criteria is required, and other factors that would affect the establishment of that criteria.
  - Estimated completion date: November 30, 2024

## To the Deputy Administrator

6. Require all NASA organizations **capture STEM engagement activities in STEM Gateway**.
  - We concurred.
  - Will use the STEM Board to validate this approach – align to the MAP definition of STEM engagement “all of NASA’s efforts to attract, engage, and educate students and support educational institutions”
  - Estimated completion date: Guidance memo from the STEM Board by December 31, 2024.



# Audit Recommendation 7



## To the Deputy Administrator

7. Require OCHCO, Mission Directorates, and Centers collaborate to **identify and incorporate critical Agency workforce needs** when developing future STEM engagement activities and develop a plan that increase the number of **STEM engagement activities aimed at skilled trade occupations**.
  - Consider NASA workforce needs when implementing STEM engagement activities
    - **We concurred**
    - Work with OCHCO to, annually, receive their determination of Mission Critical Occupations as reported in support of the President's Management Agenda Workforce Priority
    - Estimated completion date: December 31, 2024
  - Develop a plan to increase activities for skilled trade occupations
    - **We did not concur.**
    - NASA has rare opportunities for civil service employment in these areas and the OSTEM budget has limited ability to increase activities in this area.
    - However, will create additional *Surprisingly STEM* episodes featuring trade and technical professionals and conduct follow-on Virtual Classroom Connections with those subject matter experts.





The goal of NASA Engages is to provide an efficient approach in allowing the NASA workforce to engage diverse STEM learners and communities.

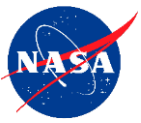


We want to connect thousands of students, employees, organizations, and industry leaders with NASA subject matter experts.

To learn more, scan the QR or visit [my.nasa.gov/engages](https://my.nasa.gov/engages)



# FY 2023 NASA STEM Highlights Report



Scan the QR code to read the report.



National Aeronautics and Space Administration

**Inspiring America's Youngest Explorers**

NASA's K-12 Efforts

Today's students are tomorrow's scientists, engineers and explorers, and NASA is invested in inspiring them to reach for the stars. NASA develops and deploys evidence-based opportunities to engage K-12 students in NASA-unique learning experiences both inside and beyond the classroom. NASA supports student curiosity through a variety of lesson plans, hands-on experiences, and engagements that teach STEM concepts and excite students about NASA's missions.

In FY 2023 NASA engaged the nation's youngest explorers in the missions that will define their generation. This fiscal year, students watched NASA's first Artemis mission to the Moon take flight. Had 18 opportunities to speak with astronauts on the International Space Station, learned about exciting STEM careers at NASA, contributed to future spaceflight through Artemis Student Challenges, and much more.

**NASA STEM Highlights 2023**

### STEM Impacts

In FY 2023 (Oct. 1, 2022 – Sept. 30, 2023), NASA impacted 750K+ students and 111K+ educators through STEM engagement activities, opportunities, awards, and content.

- MUREP - \$45.5 million**  
NASA funded nearly 100 STEM education projects across the agency's work in collaborative research, development, and STEM. MUREP offers opportunities to college students at leading research universities to conduct in the agency's expedition camps and the field. They conduct research and education. MUREP also offers research and education opportunities through MUREP's competitive awards, research opportunities, and engagements at career fairs and conferences.
- Space Quest - \$56 million**  
NASA's Space Quest Challenge and February Flight Quest bring together parties from across systems, states, and government to compete for STEM education and research. Space Quest is a contest - where youth take part in Park Quest for the State of California - centered around the ISS orbiting the Earth and the Space Shuttle Challenger. Space Quest is a contest where students from across the country compete for STEM education and research. Space Quest is a contest where students from across the country compete for STEM education and research.
- EPSCoR - \$24 million**  
NASA funded projects in 38 states through the EPSCoR program. EPSCoR provides grants to support research, education, and outreach in STEM fields. EPSCoR projects include research and development, education, and outreach. EPSCoR projects include research and development, education, and outreach. EPSCoR projects include research and development, education, and outreach.
- Next Gen STEM - \$14 million**  
NASA's Next Gen STEM program is an integrated curriculum of projects, activities, and educational products. It provides an opportunity for students to engage in STEM activities that are relevant to the agency's mission, goals, and objectives. The program offers a variety of activities to bring the excitement of NASA to students, whether in the classroom or home. It offers a variety of activities to bring the excitement of NASA to students, whether in the classroom or home. It offers a variety of activities to bring the excitement of NASA to students, whether in the classroom or home.
- SciAct - \$52 million**  
The NASA Science Teacher Education Science Teacher Education program connects NASA experts with their favorite of all ages to help the nation's teachers and provide a deeper understanding of our world and beyond, with the objective of increasing participation in the development of future knowledge. SciAct operates through a network of science teachers across the country, who are supported and mentored by NASA experts. SciAct operates through a network of science teachers across the country, who are supported and mentored by NASA experts.

### Internships, Fellowships, and Other Higher Education Awards

**9,584** Internships, fellowships, research opportunities, educator professional development, challenges, and other college/career STEM engagement opportunities

**\$44.3M** in direct financial support of student and educator participants representing 6,12 institutions and higher education institutions including 2-year, 4-year institutions and all Minority Serving Institutions (MSIs) classifications.

**32.4%** of higher education awards were faculty or educator-led or co-supervised by student participants.

**43.2%** of higher education internships and fellowship positions were filled by women, up from 38.5% in FY 2018.

**3,577** peer-reviewed publications, technical papers and presentations reported by Space Grant, MUREP, EPSCoR grantees and award institutions.

**61%** of the peer-reviewed publications were authored or co-authored by students.

**51** awards were awarded to students from 151 higher education institutions as a direct result of their NASA STEM Engagement grants or cooperative agreements.

### Research and Development

**111K+** Educator Participants in NASA STEM engagement activities\*

**750K+** Student Participants in NASA STEM engagement activities\*

Education Level	Participants
Home School Education	165
Administrative	1,061
Higher Education Faculty	7,197
Higher Education	8,195
Pre-Service Educators	2,115
High School Teachers	17,226
Elementary School	98,293
Other Participants	80.3M+

\*Other Participants\* represent general public participants in e.g., undergraduate students of all ages, parents, educators, and non-academically-researched-through STEM engagement beneficiaries.

### Internships

Students in high school through higher education gain out-of-the-world experience through NASA internships. As part of the NASA award, each intern has a role in helping the agency work its goals. Our award grants pay level equivalent pay and benefits. Supportive NASA mentors help interns maximize the most of every opportunity. Learn More

Meet some of our FY 2023 NASA interns and learn how they put their passion and skills to work for the agency.

- Jenessa Stemke**  
Oregon State University  
NASA Headquarters, Washington, D.C.  
Jenessa Stemke was selected as part of NASA's Wildland Fire Program, in which she will help support the agency's efforts to reduce the risk of wildfire on the western United States. She will be working on the western United States, where she will be working on the western United States, where she will be working on the western United States.
- Sheldon Scott**  
Prairie View A&M University  
NASA Glenn Research Center, Cleveland, Ohio  
Sheldon Scott was selected as part of NASA's Wildland Fire Program, in which he will help support the agency's efforts to reduce the risk of wildfire on the western United States. He will be working on the western United States, where he will be working on the western United States.
- Mike Fogg**  
American Military University  
NASA Headquarters, Washington, D.C.  
Mike Fogg joined NASA as an intern to help with the agency's efforts to reduce the risk of wildfire on the western United States. He will be working on the western United States, where he will be working on the western United States.
- Bosoon Karimi**  
University of Maryland Eastern Shore  
NASA Johnson's International Verification and Validation (JV&V) Facility, Farmingdale, New York  
Bosoon Karimi was selected as part of NASA's Wildland Fire Program, in which he will help support the agency's efforts to reduce the risk of wildfire on the western United States. He will be working on the western United States, where he will be working on the western United States.

**Inspiring America's Youngest Explorers**

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### Highlighting NASA's FY 2023 Investments in STEM

- MUREP DEAP** Feb. 3, 2023  
\$17.7 Million  
NASA awarded funds to eight Historically Black Colleges and Universities (HBCUs) through the new MUREP Data Science Equity, Access, and Priority in Research and Education (DEAP) opportunity. This award, in collaboration with the Science Mission Directorate, enables HBCU students and faculty to conduct innovative data science research that contributes to NASA's missions. [Learn More](#)
- MUREP WCU** June 7, 2023  
\$2 Million  
NASA awarded more than \$2 million in funding to seven Women's Colleges and Universities (WCUs) to research and develop strategies that increase retention of women in STEM degree programs and careers. Part of a Biden-Harris initiative, NASA MUREP created this opportunity to help women overcome obstacles and barriers to working in STEM fields. [Learn More](#)
- EPSCoR ISS Flight Opportunity** July 26, 2023  
\$500,000  
The International Space Station Flight Opportunity provides a ride to low Earth orbit for students. This opportunity entails cooperation with NASA's International Space Station Research Office, mission directors, and field centers. NASA selected five institutions to receive \$100,000 each - \$500,000 total - to complete their projects. [Learn More](#)
- M-STAR** July 26, 2023  
\$4 Million  
The M-STAR Space Technology Mission Opportunity provides NASA's research and technology projects while contributing to NASA's research priorities through an agency collaboration with the U.S. National Science Foundation (NSF). NSF is providing \$2.7 million in funding through its EPSCoR program. NASA is providing \$1.3 million in funding through its M-STAR program. [Learn More](#)
- EPSCoR RII** Sept. 11, 2023  
\$500,000  
Ten research investigators at nine academic institutions will advance their science and technology projects while contributing to NASA's research priorities through an agency collaboration with the U.S. National Science Foundation (NSF). NSF is providing \$2.7 million in funding through its EPSCoR program. NASA is providing \$1.3 million in funding through its M-STAR program. [Learn More](#)
- EPSCoR Research Opportunity** March 23, 2023  
\$10.8 Million  
NASA provided a total of more than \$10.8 million across 15 institutions over three years to support scientific and technical research. Each grantee will focus on a range of high-priority research needs, including deep space exploration, sustainable manufacturing in space, and advancements in technology and earth observation that benefit humanity here on Earth. [Learn More](#)
- EPSCoR R3** June 23, 2023  
\$4 Million  
Through its 2023 Rapid Response Research (R3) grants, NASA EPSCoR provided nearly \$4 million in total funding to support research aligning with the agency's strategic priorities. These grants are a vital component of NASA's STEM strategy to foster collaboration and stimulate growth in research and development in underserved areas nationwide. [Learn More](#)
- MUREP Curriculum** July 26, 2023  
\$4 Million  
The MUREP Curriculum Award was established in FY 2023 to help Minority Serving Institutions develop their research and technology capabilities, collaborate with NASA on research projects, and contribute to the agency's mission through a total of nearly \$4 million in MUREP Partnership Learning Award (PLA) funding. These funds help students to develop new technologies for use in space exploration as well as in the commercial marketplace. [Learn More](#)
- M-PLAN** Aug. 1, 2023  
\$900,000  
Students and faculty at 15 Minority Serving Institutions will grow their research and technology capabilities, collaborate with NASA on research projects, and contribute to the agency's mission through a total of nearly \$900,000 in M-PLAN funding. These funds help students to develop new technologies for use in space exploration as well as in the commercial marketplace. [Learn More](#)

**RESEARCH & TECHNOLOGY SPOTLIGHT**

OSTEM Contributes to New Innovation Featured in 2023 NASA Spinoff

A bioactive developed with the goal of growing protein in space is a potential lead candidate for astronauts in being subjected to potential quality control in space.

renewed communities in Africa and Asia. The bioactive and stable molecule were found by the International Space Station with help from a grant from NASA EPSCoR awarded to the University of South Florida. The bioactive molecule was developed by Nature's Space Technologies.

[Learn More](#)

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## Eclipse Overview Preliminary Results of Partnership Engagement

May 2, 2024



## NASA Support Structures (STEM Engagement)

### Grants and Cooperative Agreements

- NASA Defines Requirements and Provides financial support
  - Space Grant
  - EPSCOR
  - MUREP
  - TEAMS II

### Networks and Alliances

- NASA led support structure to share mission content and direct services to institutions or educators.
  - Museum and Informal Education Alliance
  - Astro-camp
  - CONNECTS
  - SPARX

### Partnerships

- NASA and External organizations collaborate on mutually beneficial goals.
- Level of effort is substantial enough that a formal agreement is generally necessary.
- No NASA funding is provided.



## Goals

- Engage students across the United States in opportunities connected to NASA missions, themes or and Programs
- Bolster external efforts that contribute to federal STEM goals
- Broaden participation of students from groups traditionally underrepresented and underserved in STEM and STEM careers

## Typical Supports

- NASA mission data
- NASA Imagery and Video
- Access to Subject matter expertise in scientific and technical disciplines
- NASA consultation on technical content review and career pathways
- Access to subject matter expertise in NASA STEM education and related disciplines



# Eclipse Overview

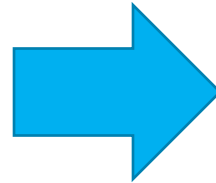


- Approach
  - Priorities and themes
  - Partnership goals
- Samples of engagement with partners
  - Broad audiences
  - Education audiences
  - Students and families
  - Pop culture
- Conclusions



## NASA Eclipse Priorities (from SMD)

- Safety
- Broadening Participation
- Share NASA Science
- Public Engagement
- Science Activation
- Citizen Science



## NASA Eclipse Call to Action



- 1. Safety First!** ➔  
Except during the brief total phase of a total solar eclipse, when the Moon completely blocks the Sun's bright face, it is not safe to look directly at the Sun without specialized eye protection for solar viewing.
- 2. Find Local Events in the Path of Totality** ➔  
Find in-person and virtual NASA-related events that you can participate in before or during the eclipse.
- 3. Use NASA Eclipse Resources With Students** ➔  
Build a [pinhole camera](#) to safely view the eclipse or learn about careers that study the sun, or what causes sun spots.
- 4. Be A Citizen Scientist and Collect Data** ➔  
Collect and submit data on topics like air temperature and clouds during an eclipse.
- 5. Cloudy Day? No Problem! Tune Into Our Webcast** ➔  
For complete coverage, watch [NASA+](#) before, during, and after the eclipse.

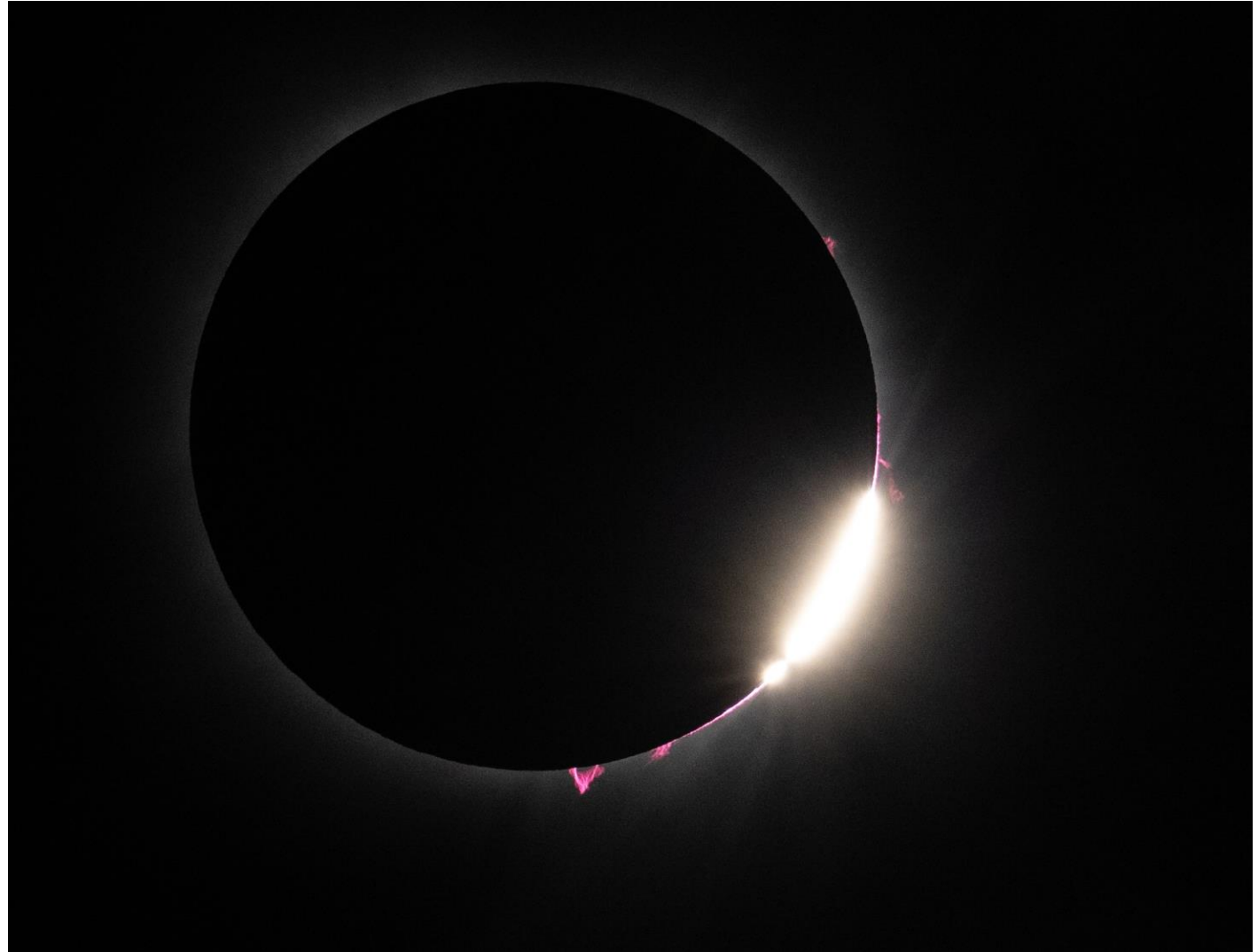


# Strategic Approach to Agency Level Partnership Engagement



OCOMM, OSTEM and SMD strategically aligned planning, support, and coordination of partners related to eclipse content to:

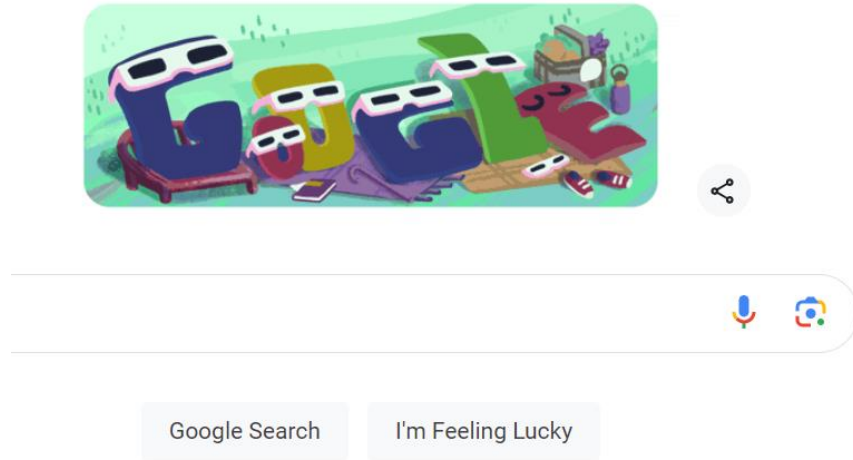
- Share consistent technical information and a clear call to action
- Provide a holistic review and prioritization of external requests
- Strengthen coordination of efforts to amplify partner content across multiple agency social platforms
- Facilitate a Collection of Common Partner Engagement Metrics



# Broad Engagement (All Audiences)



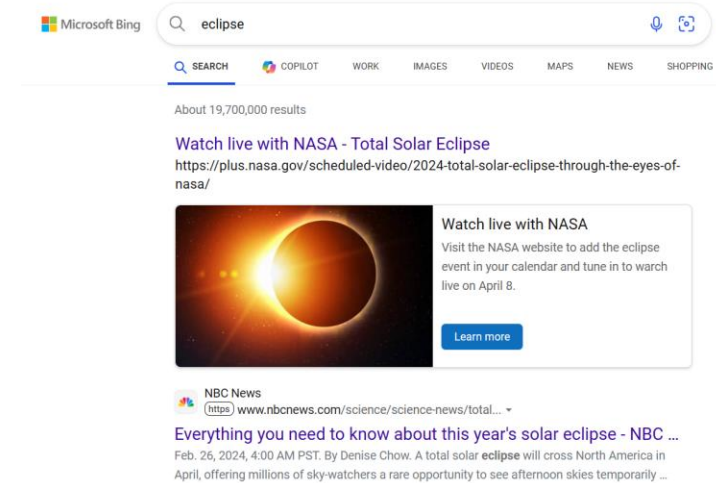
## Google Doodle (OCOMM SAA)



- Google Eclipse Doodle was deployed in North and Central America Google's blogpost with NASA resources tied to the Doodle

**3M** related Eclipse Social Media Interactions around Doodle and Associated Blog Information

## Microsoft: Multiple Platforms (OSTEM SAA)



- Learning Card Content (Quiz) available to English-Speaking Edge Users globally
- Bing Search Banner (live for 1 Hr) on April 8
- Windows Start-Up Screen live all day on April 8

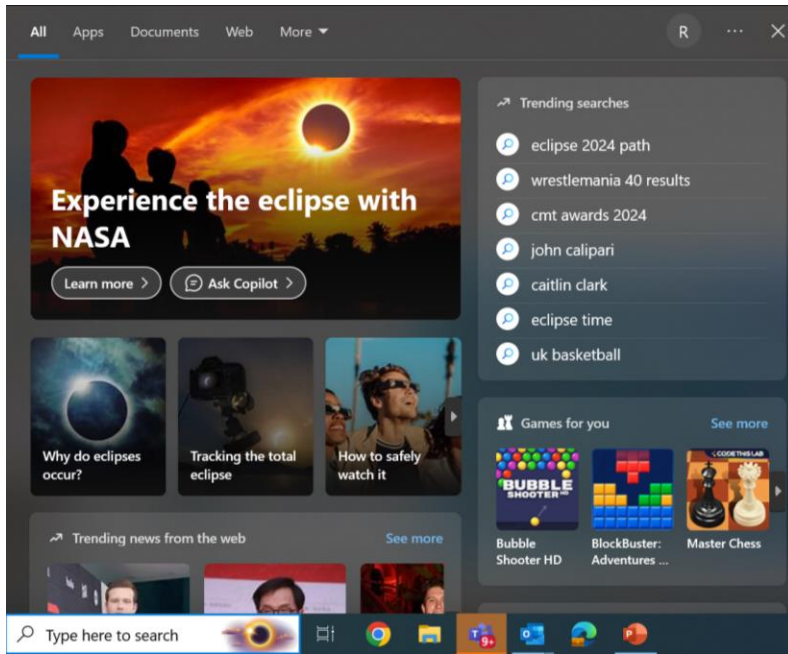
**750K** Microsoft Users Followed Link to View NASA Webcast



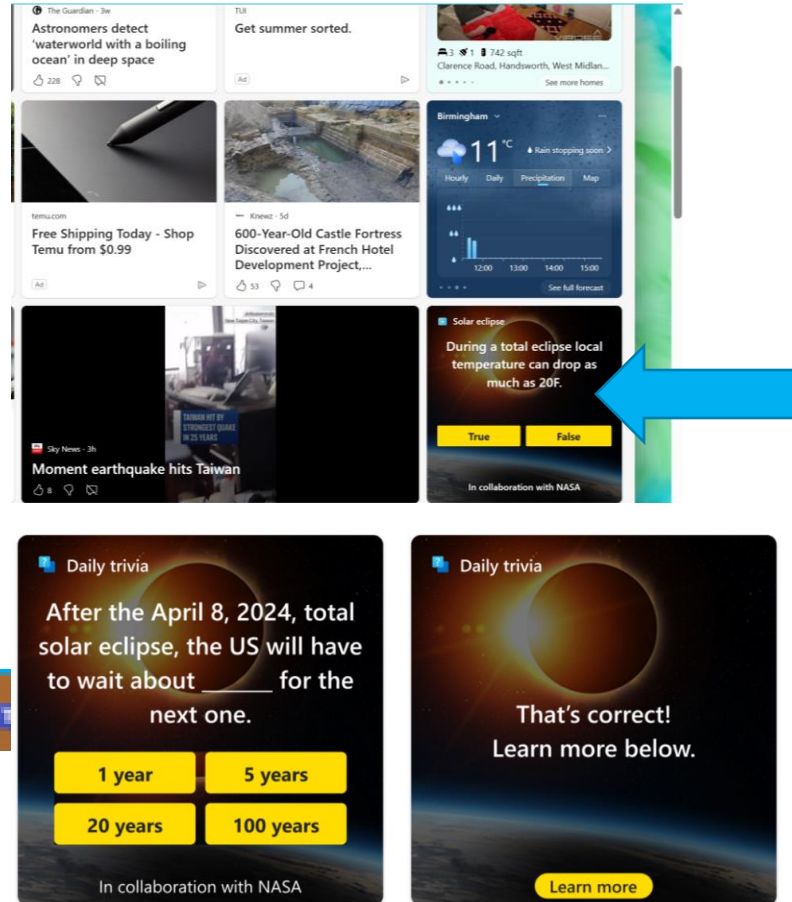
# Broad Engagement (Microsoft Example)



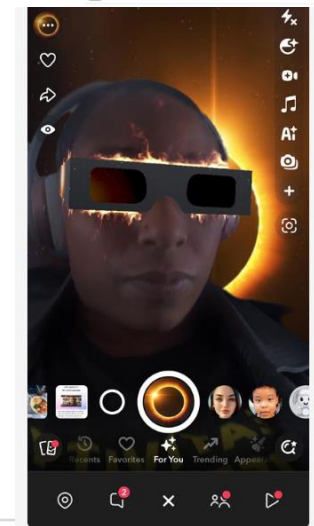
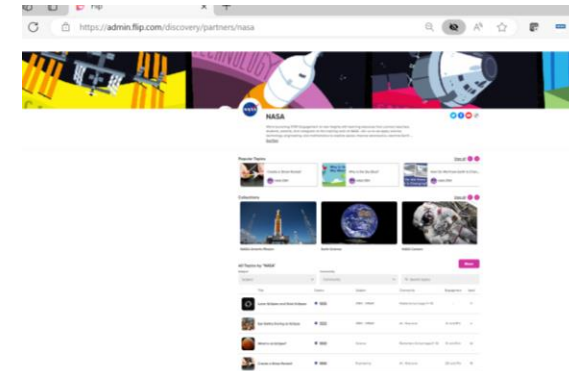
## Windows: Direct Link to Resources



## Edge: Learning Cards

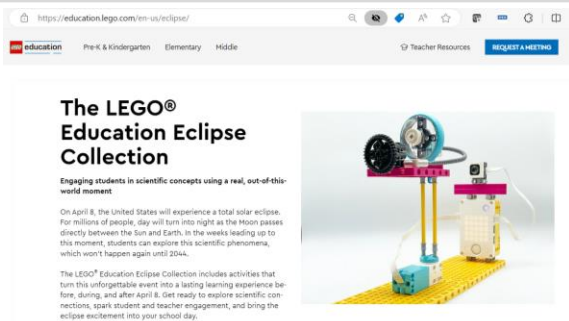


## Flip: NASA Lessons/Videos and Student Filter

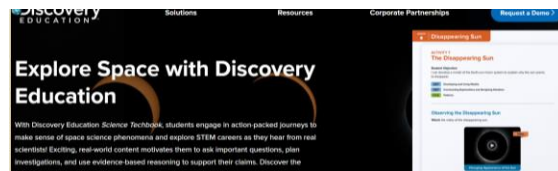




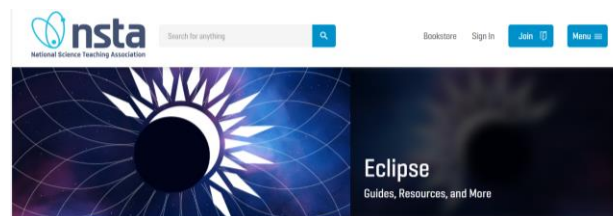
# Sample of Education Audience Engagement



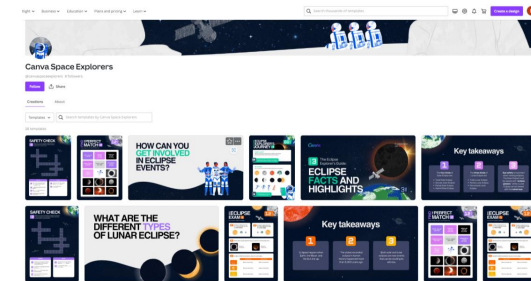
LEGO Education Eclipse Educator Resources (All Social Channels): **3M Views**



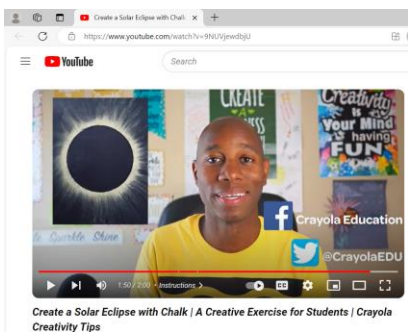
Discovery Education (Channels/Collections Featuring NASA Resources): **15**



Eclipse Resources for Teachers (NASA Express): **50K**



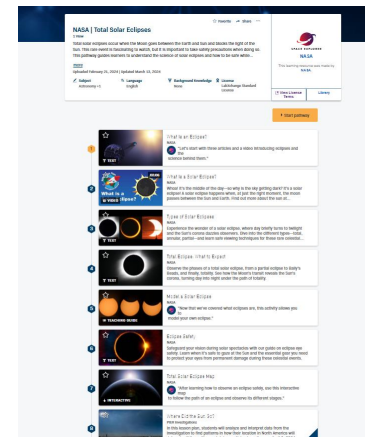
Canva Eclipse Learning Resources (Product Uses): **500K**



Crayola Education STEAM Activity on April 8 (You Tube Views) **14K**



Million Girls Moonshot (Network Share): **50 State Networks**



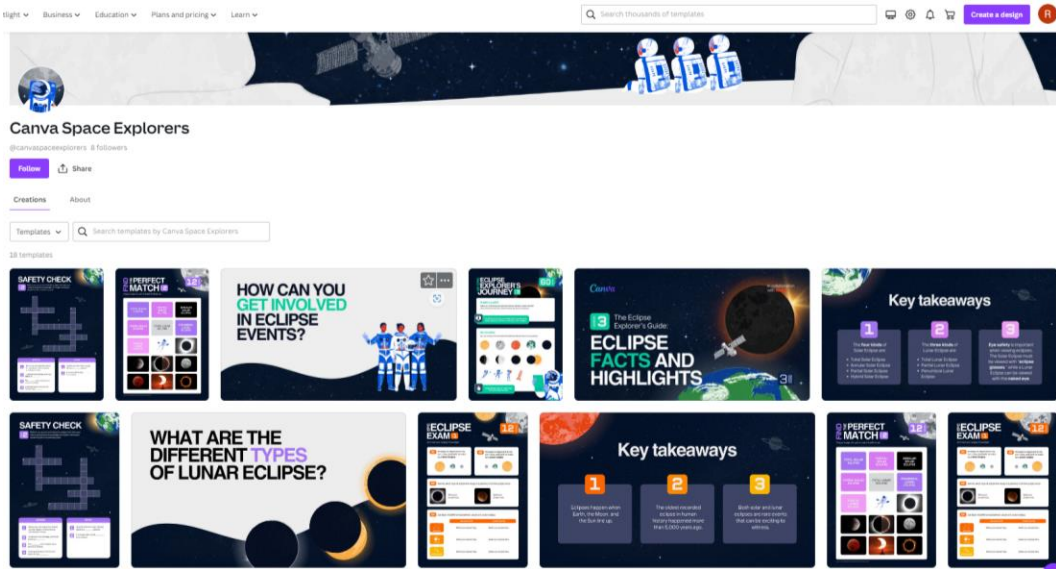
LabXchange Eclipse Cluster Cluster Downloads on April 8: **1.6K**



US Dept of Ed (Social Views): **14K**

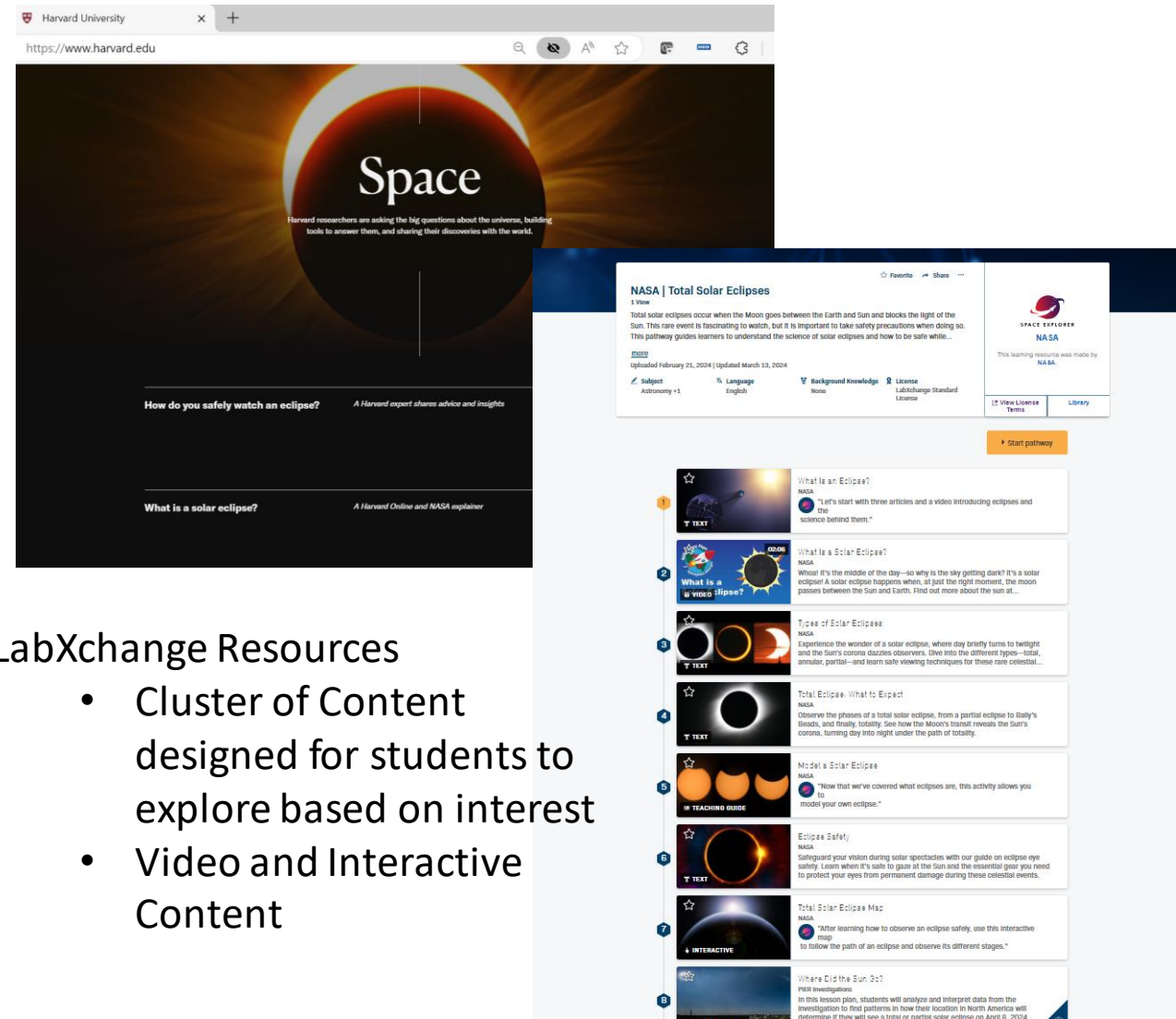


# Education Engagement (Canva and LabXchange Examples)



## Canva Eclipse Resources

- Interactive Presentations for Teachers to Share
- Interactive Quizzes
- Videos and other Multi-media



## LabXchange Resources

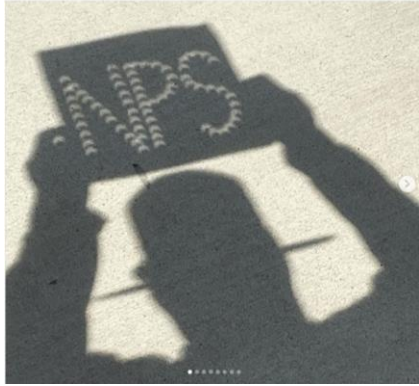
- Cluster of Content designed for students to explore based on interest
- Video and Interactive Content



# Sample of Student and Family Engagement



Instagram



National Parks  
(All Social Channels):  
**670K**

Plaza Sésamo @PlazaSesamo  
No, Elmo, esto no es el espacio 🤔, pero ¡corramos al watch party de @nasa\_es para que podamos ver el #EclipSésamo! Disfrútalos aquí: [m.sesame.org/eclipsesame](https://m.sesame.org/eclipsesame) a partir de los siguientes horarios! 🇺🇸 🇨🇴 🇵🇪  
11:30 a.m. | México.  
12:30 p.m. | Colombia - Ecuador - Perú.  
Translate post



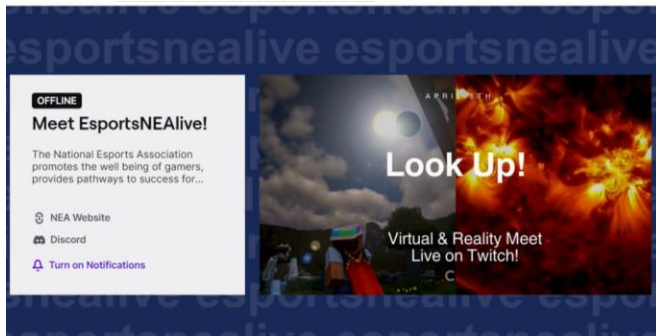
Sesame Street/Sesamo  
(All Social Channels):  
**1.6M**



Peanuts Eclipse  
Student/Teacher Activities  
and Social  
(All Social Channels): **900K Views**



Jack and Jill Of America  
(Community Events): **62**



Natl E-sports Association  
Game Jam  
(Twitch Views): **417K**



MLB Players Trust  
(All Social Channels):  
**178K Views**  
(You Tube Views): **79K Views**



# Student and Family Engagement (MLBPA and NEA Examples)



## MLB Players Association

- Baseball players with STEM degrees provided safety messages and eclipse science background.
- Steven Kwan (Guardians), Paul DeJong (White Sox) released through multiple channels

## Unreal Engine's Eclipse Game Jam Workshop!

Your students will embark on a cosmic gaming journey at Unreal Engine's Eclipse Game Workshop March 9th - 10th 2024! Dive into the challenge of crafting an Eclipse-themed game within Fortnite using Unreal Engine, and you could unlock an exclusive collaboration opportunity with Unreal Engine for the grand Eclipse event on April 8th.

## What is A Game Jam?

Teams of University students conceptualize, design, and create an original eclipse game concept. The top game development team worked with the Unreal Engine and Epic Games mentors to finish and premier games on Eclipse Twitch stream on April 8.



# Focus on Underrepresented Audiences (Student and Family Examples)



Institution	Plans
Hinds Community College	Watch Party in collaboration with Utica Institution Museum
Northern Oklahoma College	Watch party with Enid Planetarium
Tennessee State University	Campus-wide Solar Eclipse STEM Event
University of Texas San Antonio	Citywide event and local school visits
Clayton State University	Local event on campus and with middle and high school students
Meharry Medical College	Local event with students and faculty
UTEP	Sun City Solar Eclipse Viewing Event
Meridian Community College	Local watch party
Bowie State University	Student and faculty Event



Bowie State University invites community to partial solar eclipse watch party

OSTEM/MUREP coordinated with SMD to provide Eclipse resources, glasses and speakers to MSIs in the path of totality.



# Connecting with Pop Culture



*Lego (Commercial)*  
(All Social Channels):  
**978K**

*Time Square/NASDAQ*  
(In-Person Traffic): **200K**

*Barbie*  
(IG Views): **270K**

*Krispy Kreme*  
(All Social): **586K**



*Minecraft*  
(Instagram): **14M Views**



# Conclusion



- OSTEM, OCOMM and SMD's Engagement of Partners helped the Agency:
  - Share Safe Viewing Messages
    - ✓ **17 of 31** Collaborations on social had **safety as a primary theme.**
  - Share Science content through NASA's Webcast
    - ✓ Early Returns Indicate that Partnership efforts added **significant additional viewers to NASA's webcast**
  - Amplify Eclipse Messages Via Social Media to connect with Students and the Public
    - ✓ Partner Social Engagement **reached 10s of Millions**
  - Share Resources with the Education Community
    - ✓ Initial Partner Product Engagement Data is strong (full numbers from partners may not be available for 3-6 Months)
  - Reach Underrepresented Audiences
    - ✓ Engagements with Minority Serving Institutions, Jack and Jill USA, Sesamo, Million Girls Moonshot, the Girl Scouts and others expanded NASA reach.



# Agenda



- 10:00 AM Welcome & Introductions
- 10:15 AM NASA STEM Engagement Updates
- 10:45 AM Aeronautics Research Mission Directorate – STEM Engagement Update
- 11:00 AM Partnerships (Priority Area 2)
- 11:30 AM Break (10 minutes)**
- 11:40 AM STEM Gateway (Priority Area 3)
- 12:30 PM Lunch
- 1:00 PM STEM Impacts (Priority Area 4)
- 1:30 PM Generation of Findings and Recommendations
- 3:00 PM Adjourn Meeting







**Break**

# Agenda



- 10:00 AM Welcome & Introductions
- 10:15 AM NASA STEM Engagement Updates
- 10:45 AM Aeronautics Research Mission Directorate – STEM Engagement Update
- 11:00 AM Partnerships (Priority Area 2)
- 11:30 AM Break (10 minutes)
- 11:40 AM STEM Gateway (Priority Area 3)**
- 12:30 PM Lunch
- 1:00 PM STEM Impacts (Priority Area 4)
- 1:30 PM Generation of Findings and Recommendations
- 3:00 PM Adjourn Meeting



# Priority Area 3: STEM Gateway



## NASA STEM Gateway & the Citizen View

PRESENTED BY

Douglas Goforth

DATE

6/18/2024

Applicants/Registrants Disability Status

Yes  
No

52k

48k

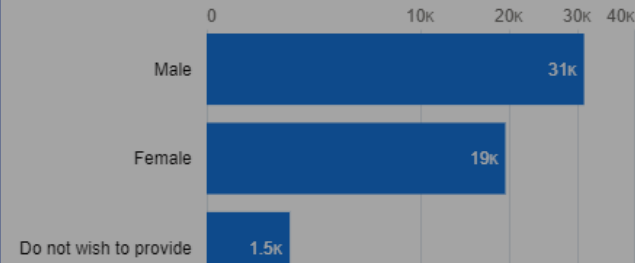
Applicants/Registrants Veteran Status

Yes  
No  
Do not wish to provide

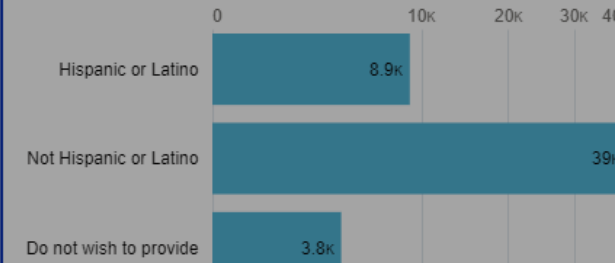
52k

50k

Applicants/Registrants Gender



Applicants/Registrants Ethnicity

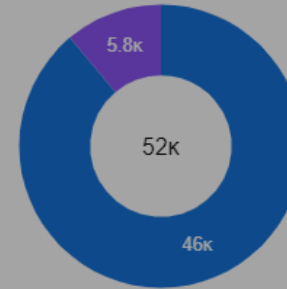


Applicants/Registrants Race

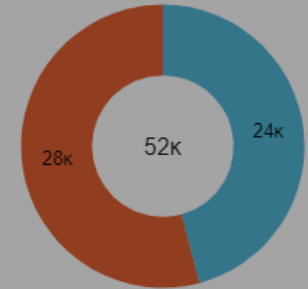
American Indian or Alaska Native  
Asian  
Black or African American  
Native Hawaiian or Other Pacific Islander  
White  
Do not wish to provide



Applicants/Registrants Underrepresented Race

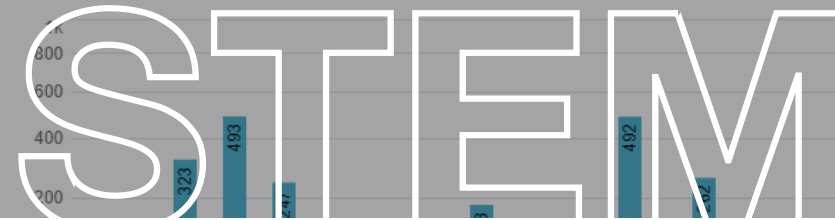


Applicants/Registrants Underrepresented Learner



Applicants/Registrants Legislative District

Filter by State: All



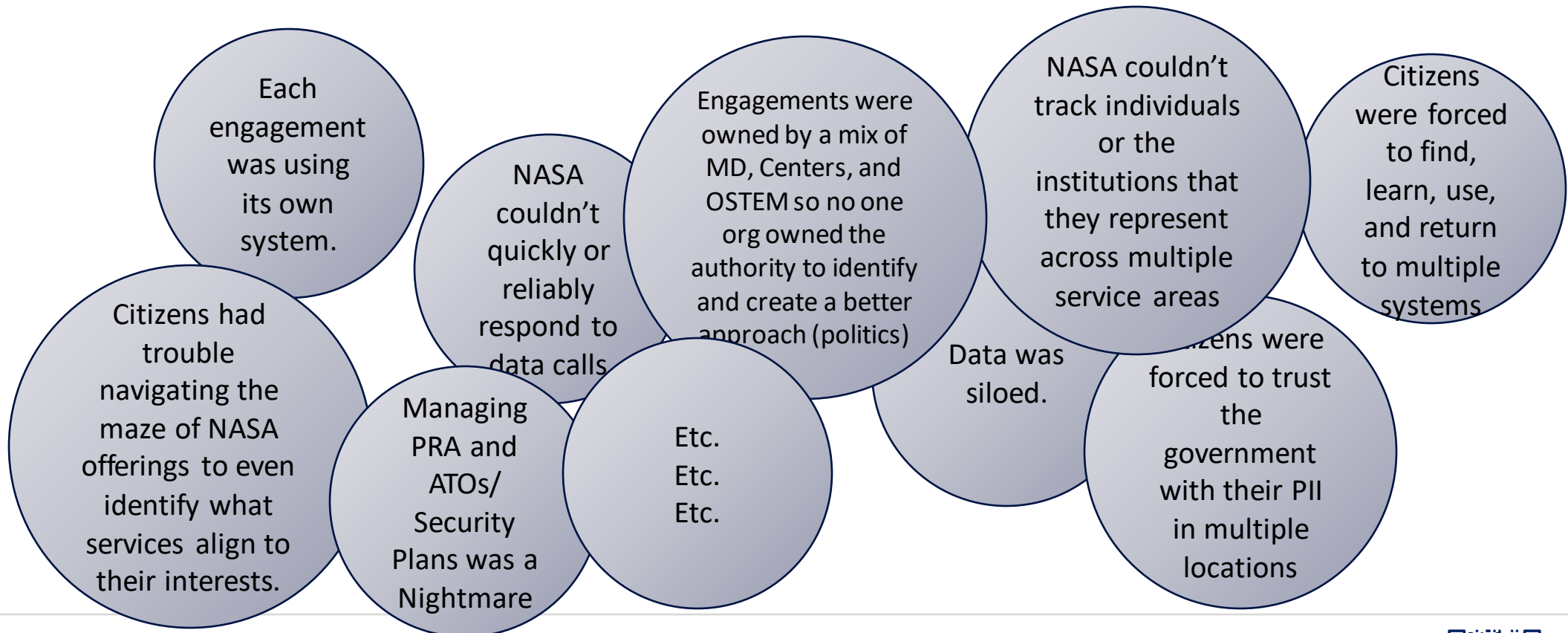
# NASA

# NASA STEM: The Problem Statement

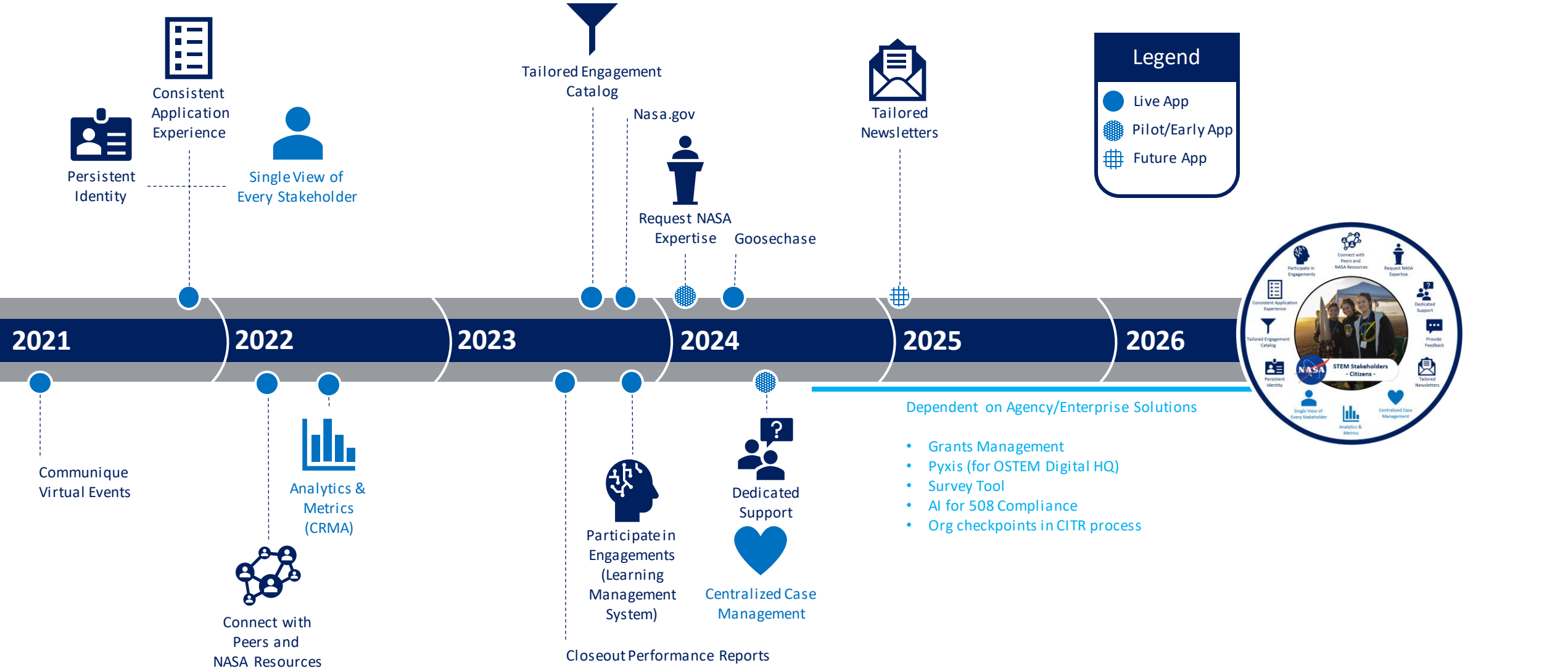


The Good: There were over 100 STEM Engagements operating across the agency – each with a similar goal of offering STEM services to individuals and institutions.

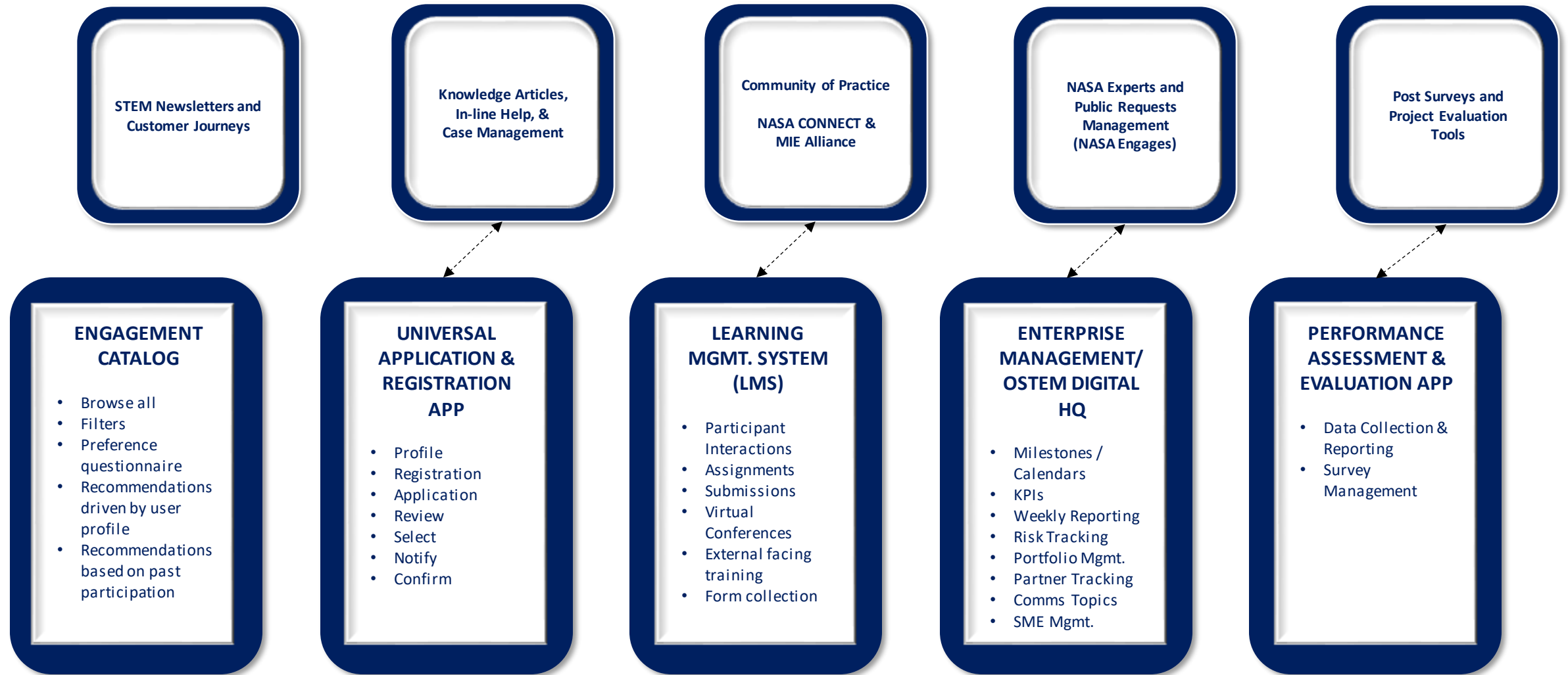
The Bad: Until October 2021, NASA was a difficult partner to the citizens that we were supporting:



# OSTEM: Activities In-Flight



# OSTEM Internal View: Primary Functional System Requirements



# NASA STEM: Citizen View

**203K+**

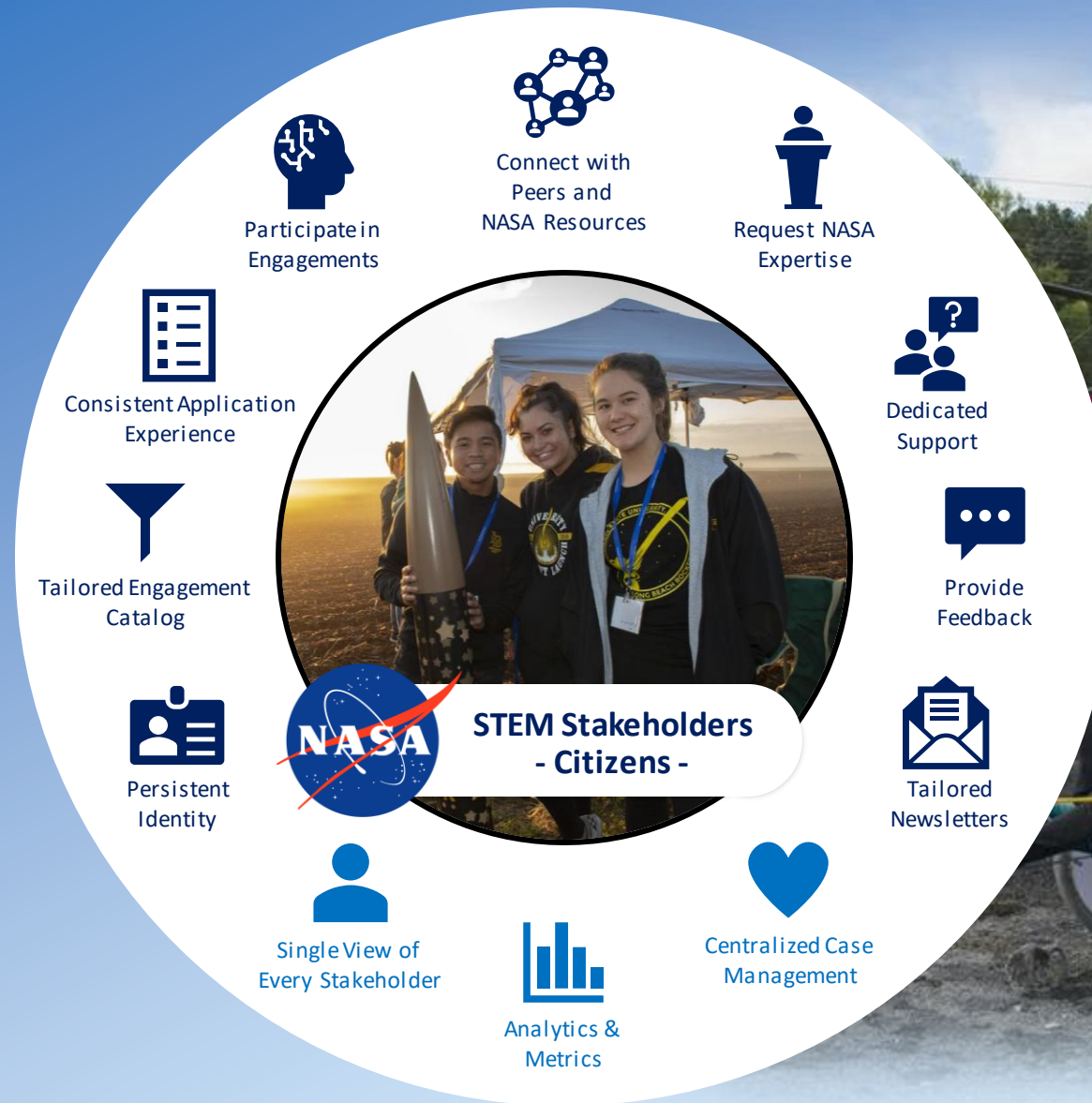
number of citizens  
with profiles in  
STEM Gateway

**7.7K+**

number of institutions  
with representatives in  
STEM Gateway

**542K+**

number of applications  
successfully submitted through  
STEM Gateway



# NASA STEM: Citizen View

Element: *Persistent Identity*

Status: *Deployed*

## STEM Functional Mapping



Foundational – instrumental  
in allowing all other functions



## Citizen Benefits

As a citizen having a persistent identity that carries across all of my STEM interactions with NASA and its partners allows me to spend more time accomplishing my goals and less time registering for different opportunities and trying to find past interactions.







# Persistent Identity



Tailored Engagement Catalog



Consistent Application Experience



Participate in Engagements



Connect with Peers and NASA Resources



Request NASA Expertise



Dedicated Support



Provide Feedback



Tailored Newsletters

Controls Access



Drives Content



Stores History/Status



Centralized Case Management



Single View of Every Stakeholder



Analytics & Metrics

Foundational



**NASA STEM** INSPIRE - ENGAGE - EDUCATE - EMPLOY  
The Next Generation of Explorers



[stem.nasa.gov](https://stem.nasa.gov)

# OSTEM: OCHCO Pathways Pilot (33 Students)



**Course Connections (2)**

CC-39552  
Course O... Pathways Intern  
Session: NASA Pathways: Fall  
Project A... NASA Pathways

CC-29431  
Course O... Spherical Motor 3D M  
Session: Intern: Spring 2023  
Project A... N

**Course Connections (2)**

CC-42204  
Course O... Pathways Intern  
Session: NASA Pathways: Fal  
Project A... NASA Pathways

CC-29715  
Course O... International Space

**Course Connections (2)**

CC-42231  
Course O... Pathways Intern  
Session: NASA Pathways: Fall  
Project A... NASA Pathways

CC-18792  
Course O... Cryogenic Propellan

**Course Connections (2)**

CC-30704  
Course O... 2023 USLI - College/  
Session: 2023 NASA Student  
Project A... HEOMD

CC-42203  
Course O... Pathways Intern

**Course Connections (2)**

CC-30612  
Course O... Lunabotics 2023  
Session: Lunabotics 2023  
Project A... HEOMD

CC-42201

**Contacts > Marco Gudino**

**Course Connections** New | Char 2023

6 items • Updated a few seconds ago ⚙️

	<input type="checkbox"/> Course Con... ▾	Course Offering ID ▾	Session ▾	Project Account ▾	Course Name
1	<input type="checkbox"/> CC-34108	REACT - Additive Construction	Intern: Summer 2023	NASA Internships	Internships - KSC
2	<input type="checkbox"/> CC-42212	Pathways Intern	NASA Pathways: Fall 2023	NASA Pathways	NASA Pathways
3	<input type="checkbox"/> CC-3772	Mini-Rassor Challenge Development	Intern: Spring 2022	NASA Internships	Internships - KSC
4	<input type="checkbox"/> CC-21278	NCAS: Mini-Rassor Challenge Devel...	Intern: Summer 2021	NASA Internships	Internships - KSC
5	<input type="checkbox"/> CC-21351	NCAS: Mini-Rassor Challenge Devel...	Intern: Fall 2021	NASA Internships	Internships - KSC
6	<input type="checkbox"/> CC-29065	REACT - Additive Construction	Intern: Spring 2023	NASA Internships	Internships - KSC





# Persistent Identity



NASA STEM Gateway Analytics Dashboard

Modified



Data updated: Today at 4:20 PM



Application Status

Engagement Affiliations

[Closeout Performance Report Dashboard](#)

## NASA STEM Gateway Analytics Dashboard

Explore, analyze, and extrapolate aggregated data around Applicants, Participants and Registrants within NASA STEM Gateway for **REAL-TIME MONITORING** across all of your activities.

The filters up top and all the values in the charts below are interactive, allowing you to deep dive into specific datasets to gain more focused insights across the OSTEM portfolio.

Applicants

Participants

Gateway Profiles

Displays **Application** data for all records in any of the following states:

*Submitted, Pending Offer, Offer Expired, Accepted Offer, Declined Offer, or Not Accepted*

Displays **Participant** data for selected applicants

Displays completed **Profile** data for all registered users, regardless if an Application exists

### DASHBOARD FILTERS

Type  
All

Profile Completion FY  
All

Institution  
All

203,714

Unique Profiles:



**NASA STEM** INSPIRE - ENGAGE - EDUCATE - EMPLOY  
The Next Generation of Explorers



[stem.nasa.gov](https://stem.nasa.gov)

# NASA STEM: Citizen View

Element: Tailored Engagement  
Catalog

Status: Deployed –  
Q1, FY24

## STEM Functional Mapping



## Citizen Benefits

As a citizen having a tailored engagement catalog makes it easier to find opportunities that align well to my personal goals and areas of interest. Additionally, it allows me to share opportunities with my peers and to monitor the status of all applications in one place.



Welcome back, Tim

Education Type  
Undergraduate

Current Grade Level  
Undergraduate Senior

Primary Institution  
Purdue University

Enrollment Status  
Full Time

Completed Applications  
15

Incomplete Applications  
3

Pending Offers  
1

Opportunity Matches  
2

Pending Deliverables  
3

Incomplete Surveys  
0



### Explore Opportunities

Lorem ipsum dolor sit amet Lorem ipsum dolor sit amet Lorem ipsum dolor sit amet

[View All Opportunities](#)



### Adjust Your Profile

Lorem ipsum dolor sit amet Lorem ipsum dolor sit amet Lorem ipsum dolor sit amet

[View Profile](#)



### Let us Guide You

Lorem ipsum dolor sit amet Lorem ipsum dolor sit amet Lorem ipsum dolor sit amet

[Take the quiz](#)

## My Bookmarked Opportunities



Posted 10 minutes ago

Registration ends 8/30/23

Bookmarked

### Ecological Conservation Mars Support: Outreach & Communications

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit revrr evv.

Challenges Virtual Students College US Citizen Only



Posted 10 minutes ago

Registration ends 8/30/23

Bookmarked

### Mars Reconnaissance Team Internship

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit revrr evv.

Challenges Virtual Students College US Citizen Only



Posted 10 minutes ago

Registration ends 8/30/23

Bookmarked

### Earth Observations to Manage Wildfire Risk

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit revrr evv.

Challenges Virtual Students College US Citizen Only

Need help finding an opportunity? Take our quiz for customized recommendations. [Take the quiz.](#)

### Explore NASA STEM Opportunities

Find Internships, College and Pre-College experiences, Educator experiences, and other opportunities related to NASA missions

Search All Openings

#### Filters [x Clear](#)

My Saved Views

Select an View

[Edit Saved Search](#)

Filter Using My Profile  
Enabled

- Opportunity Type
- Internships
  - Fellowships
  - Challenges
  - Educator Professional Development
  - College STEM Experience
  - Pre-College STEM Experience

Session

Activity Date Range

Start Date  Select Date

Start Date  Select Date

- Audience
- Educator Type
- Academic Level
- Career Category

Viewing 12 of 57 Opportunities

Sort By: Registration Date

Challenges Virtual US Citizen Only

Skills

Label  Search Skills

Major

Activity Format

- In-Person
- Hybrid
- Virtual

State

Citizenship Requirements

Work Schedule

NASA Affiliation

Registration ends 8/30/23

[Show Map](#)

on Mars Support: Outreach & Communications

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Virtual Students College US Citizen Only

Team Internship

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Virtual Students College US Citizen Only

Manage Wildfire Risk

et, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut  
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Challenges Virtual Students College US Citizen Only

Prepare For Launch  
Opportunity Finder: Guided Experience



# Which category of audience do you most closely identify with in your search for NASA STEM opportunities?



Student



Educator



Space Enthusiast

Continue



Prepare For Launch  
Opportunity Finder: Guided Experience

When presented with the opportunity to interact with fellow STEM explorers and NASA experts, I prefer:



In-person events



Virtual events



No preference

See Results

[Back](#)



Need help finding an opportunity? Take our quiz for customized recommendations. [Take the quiz.](#)

### Explore NASA STEM Opportunities

Find Internships, College and Pre-College experiences, Educator experiences, and other opportunities related to NASA missions

Search All Openings

#### Filters [x Clear](#)

My Saved Views  
Select an View  
[Edit Saved Search](#)

Filter Using My Profile  
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- Opportunity Type
  - Internships
  - Fellowships
  - Challenges
  - Educator Professional Development
  - College STEM Experience
  - Pre-College STEM Experience

Session

Activity Date Range

Start Date  Select Date

Start Date  Select Date

- Audience
- Educator Type
- Academic Level
- Career Category

Viewing 12 of 57 Opportunities

Sort By: Registration Date

- Challenges
- Virtual
- US Citizen Only

Show Map



Posted 10 minutes ago Registration ends 8/30/23 [Bookmark](#)

**Ecological Conservation Mars Support: Outreach & Communications**

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit rewr evv.

Challenges  Virtual  Students  College  US Citizen Only

You applied to this opportunity on 10/10/23 [View Application](#)



Posted 10 minutes ago Registration ends 8/30/23 [Bookmark](#)

**Mars Reconnaissance Team Internship**

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit rewr evv.

Challenges  Virtual  Students  College  US Citizen Only



Posted 10 minutes ago Registration ends 8/30/23 [Bookmark](#)

**Earth Observations to Manage Wildfire Risk**

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit rewr evv.

Challenges  Virtual  Students  College  US Citizen Only



Posted 10 minutes ago Registration ends 8/30/23 [Bookmark](#)



## Mars Reconnaissance Team Internship

ID: 015816 Course: Planets

Share

Print

Bookmark

Apply

### About this opening

The Quantum Engineering and Sensor Technology (QuEST) Laboratory at NASA Goddard Space Flight Center in Greenbelt, MD is calling all "Quantum Engineers" looking to advance the technology of quantum sensing for Earth science and space applications!

We are looking for undergraduate students with hands-on laboratory experience, ideally with lasers, optics, and ultra high vacuum chambers, as well as with basic computer programming experience such as data analysis, automation, or interfacing with external instruments.

The Quantum Engineering and Sensor Technology (QuEST) Laboratory at NASA Goddard Space Flight Center in Greenbelt, MD is calling all "Quantum Engineers" looking to advance the technology of quantum sensing for Earth science and space applications!

We are looking for undergraduate students with hands-on laboratory experience, ideally with lasers, optics, and ultra high vacuum chambers, as well as with basic computer programming experience such as data analysis, automation, or interfacing with external instruments.

This is an opportunity to help build NASA Goddard's first cold atom interferometry laboratory to provide a test bed for advanced laser cooling of Cs and Rb. Cold atom-based gravimeters and gravity gradiometers will enable the next generation of Earth science, Planetary science and Astrophysics precision gravity measurements. Opportunities include designing and building a 3D magneto-optical trap (MOT) and light pulse interferometer at the Goddard campus in Greenbelt, MD as well as opportunities to build and test one of the world's largest and most sensitive cold atom gravity gradiometers.

#### Skills

**Communication, Problem solving, Mathematics, Aerodynamics, Creativity, Analytical skill, Critical thinking, Structural analysis Control system**

#### Languages

**Not Specified**

#### Website

<http://nasa.gov/opportunties/loremipsum>

Registration End Date: 09/09/2023



### Key Details

Engagement Type <b>Challenge</b>	Eligible Applicants <b>Students</b>
Academic Level <b>College</b>	Activity Type <b>Virtual</b>
Citizenship Restrictions <b>US Citizen Only</b>	Unique ID <b>015816</b>

### Additional Information

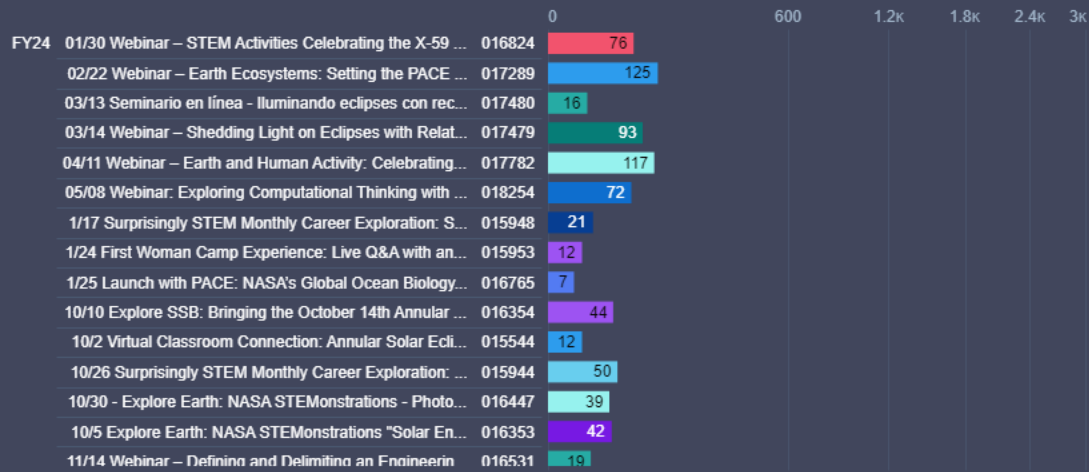
Preferred Major  
**Engineering Aeronautical**

Contact  
**Jane Smith [jan.smith@NASA.gov](mailto:jan.smith@NASA.gov)**

Skills

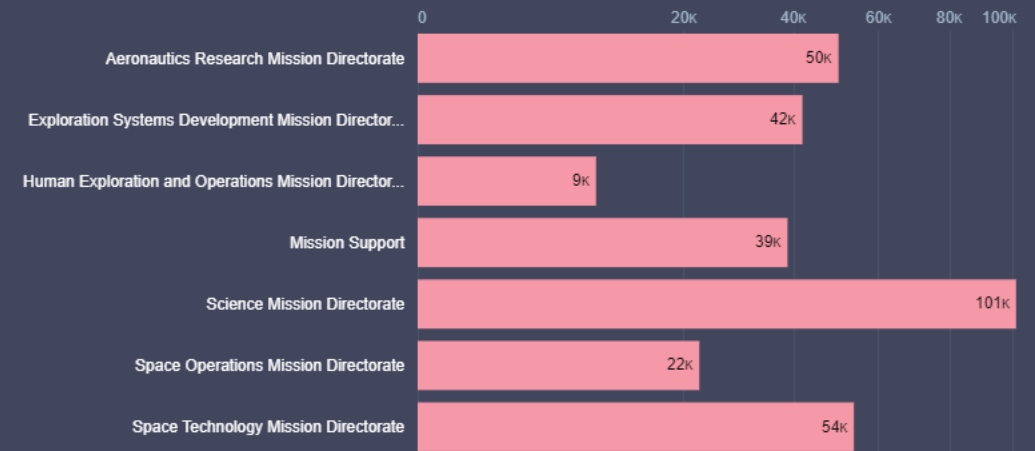
### Applicants by FY and Engagement Opening

Engagement Opening / Unique ID that each application was submitted for, grouped by Fiscal Year



### Applicants Mission Directorate

NASA Mission Directorates that the Openings for which applications were submitted for align to



**Number of STEM Engagement Openings hosted in FY24: 1,493**

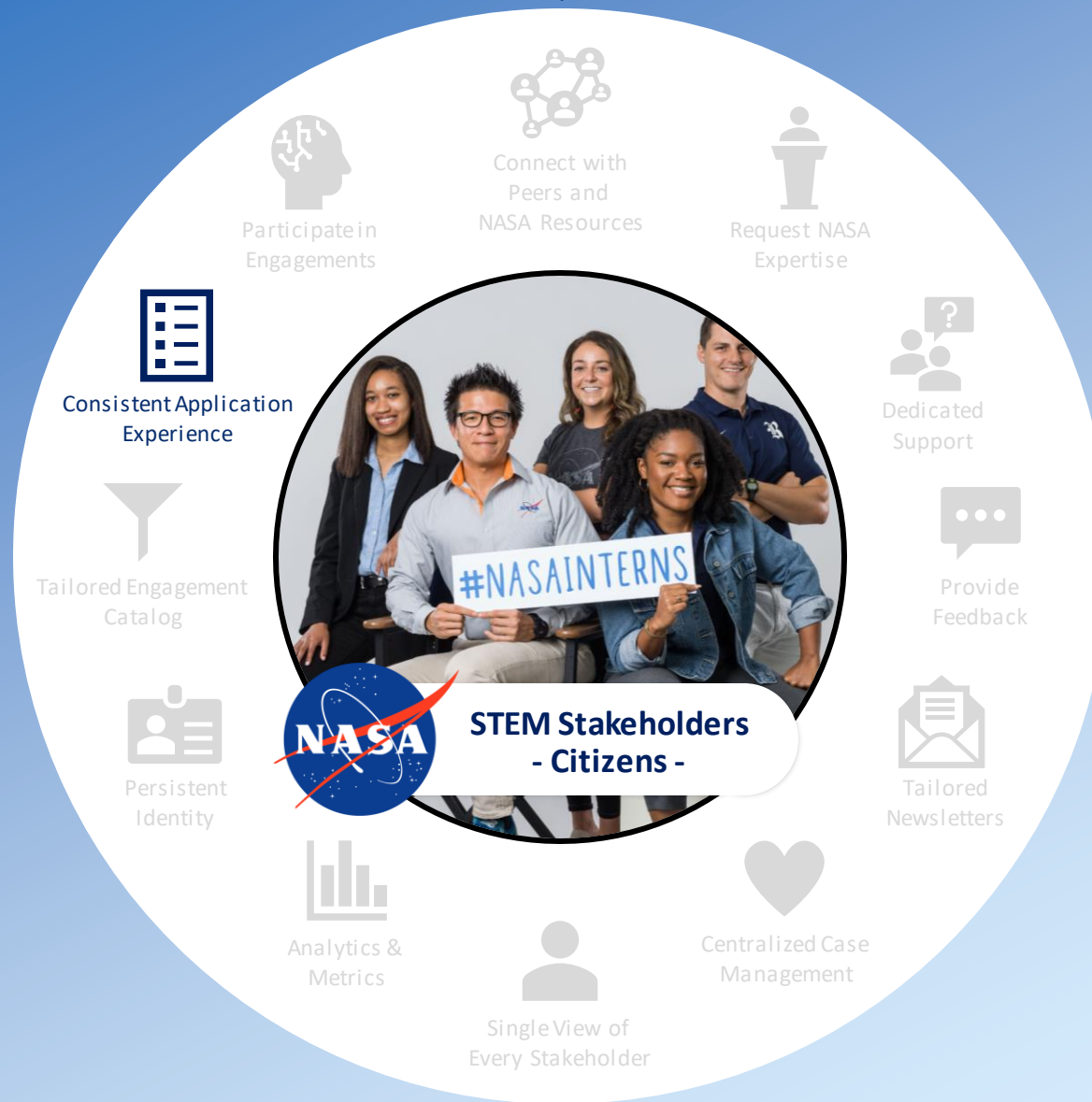


# NASA STEM: Citizen View

Element: Consistent Application Experience

Status: Deployed, Oct 2021

## STEM Functional Mapping



## Citizen Benefits

As a citizen a consistent application experience reduces the burden of having to located and learn how to interact with multiple application systems. It also allows me to reuse data from previous applications so that I'm not starting from scratch each time I want to apply to something new.

Additionally, it minimizes the number of systems that I am entrusting with my personal data.



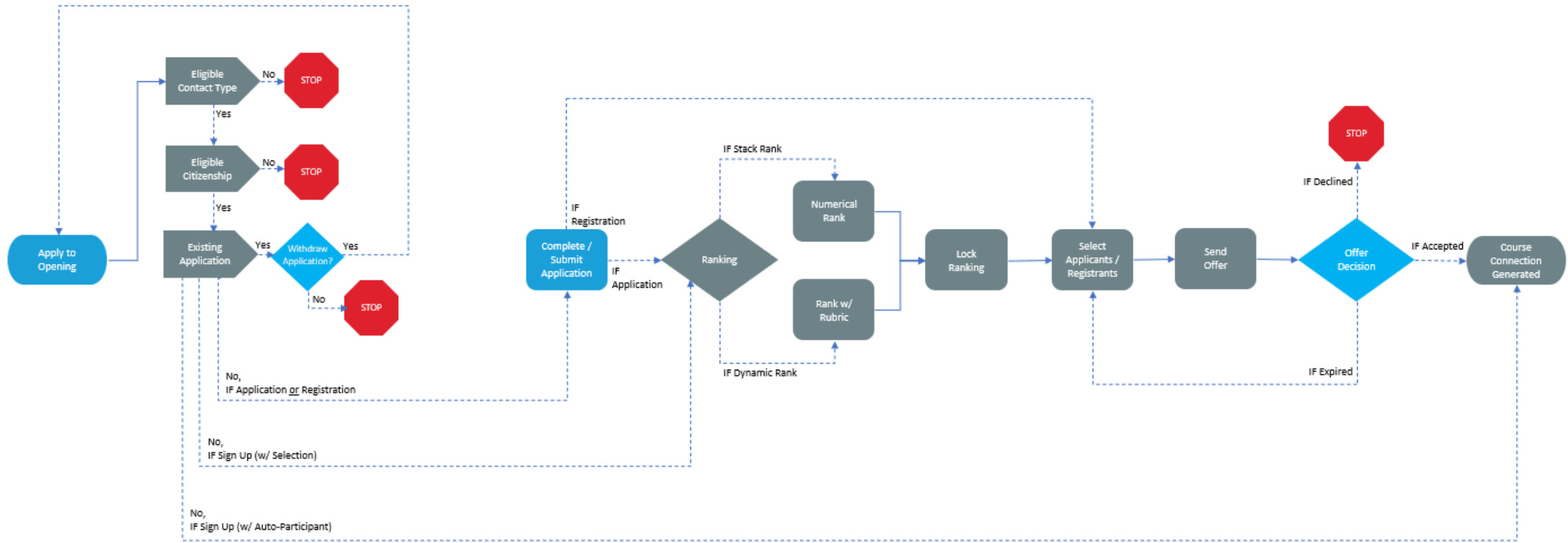


# Consistent Application Experience – *Application Flows*





# Consistent Application Experience – Validation & Selection





# Consistent Application Experience



NASA STEM Gateway Analytics Dashboard

Modified



Data updated: Today at 4:20 PM



Application Status

Engagement Affiliations

Closeout Performance Report Dashboard

## NASA STEM Gateway Analytics Dashboard

Explore, analyze, and extrapolate aggregated data around Applicants, Participants and Registrants within NASA STEM Gateway for **REAL-TIME MONITORING** across all of your activities. The filters up top and all the values in the charts below are interactive, allowing you to deep dive into specific datasets to gain more focused insights across the OSTEM portfolio.

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Participants

Gateway Profiles

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*Submitted, Pending Offer, Offer Expired, Accepted Offer, Declined Offer, or Not Accepted*

Displays *Participant* data for selected applicants

Displays completed *Profile* data for all registered users, regardless if an Application exists

### DASHBOARD FILTERS

Type: All | FY: All | Session: All | Project: All | Managing Org/Center: All | Delivery Type: All | Activity Type: All | Institution: All

Engagement Type: All | Engagement: All | Engagement Opening: All

### TOGGLE THE DATASET BETWEEN VIEWS

By Applicant

All Rows

542,336

Total Applications:



**NASA STEM** INSPIRE - ENGAGE - EDUCATE - EMPLOY  
The Next Generation of Explorers



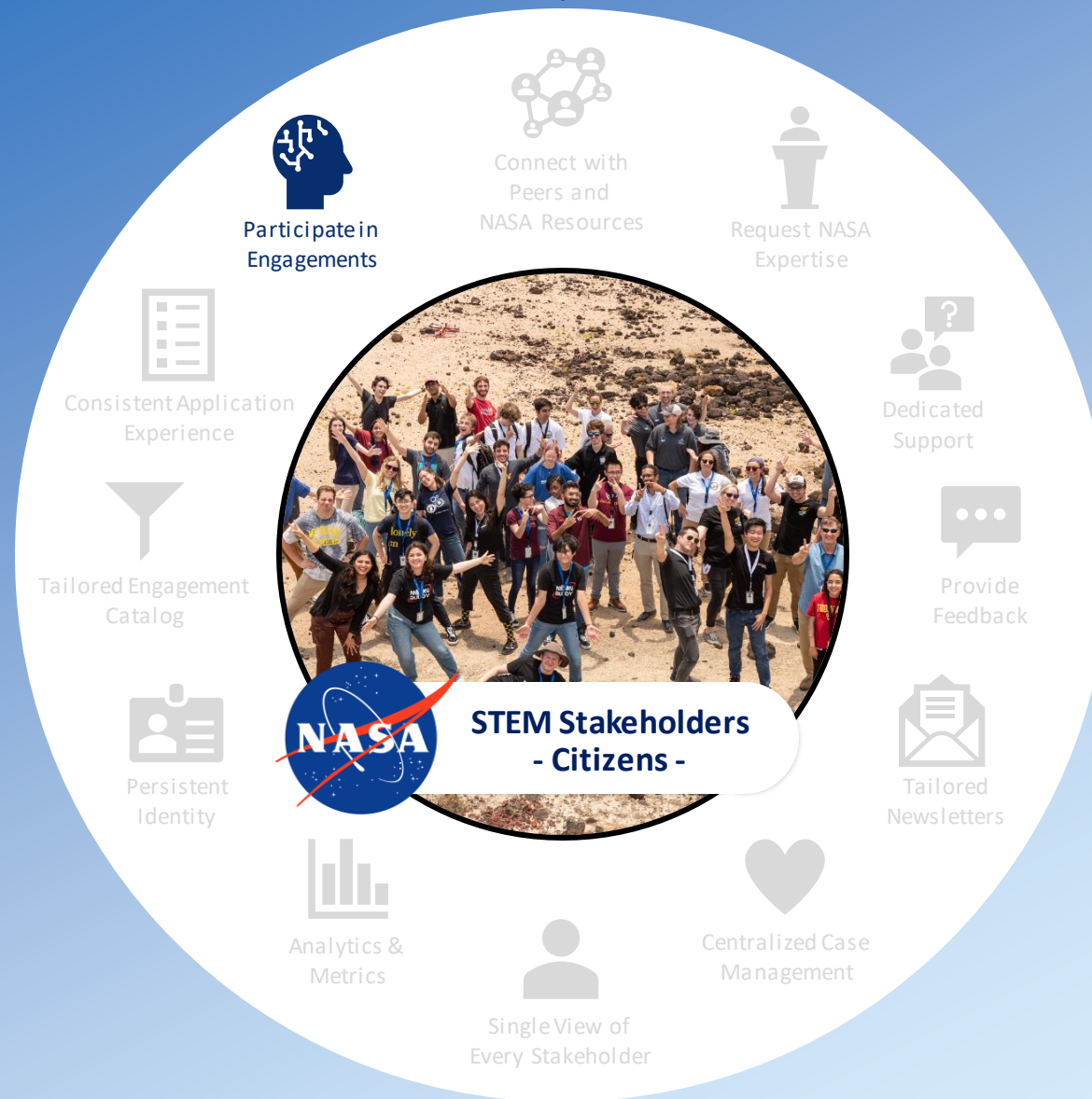
stem.nasa.gov

# NASA STEM: Citizen View

Element: Participate in Engagements

Status: Deployed Q2, FY24

## STEM Functional Mapping



## Citizen Benefits

As a citizen having a single environment for tracking coursework for the various engagements I am enrolled in allows me to avoid confusion on where to go for each activity. It also allows me to track all deadlines and past performance in one place while reducing the burden of having to learn how to use multiple platforms.








HAS Online 2023/2024

Immersive Reader

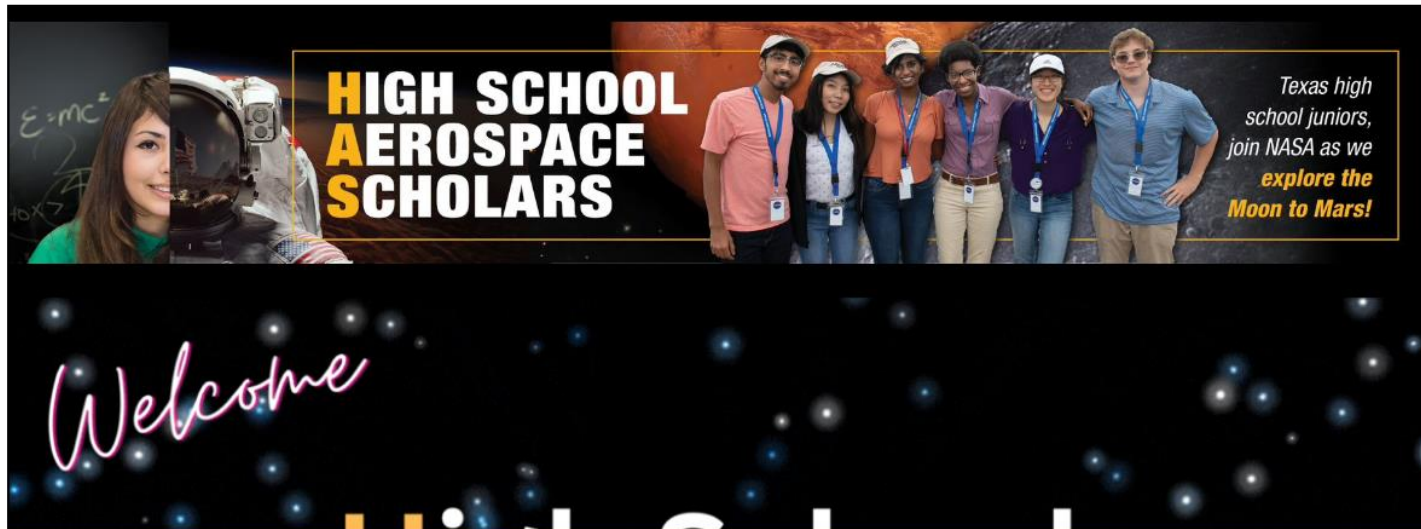


- Home
- Modules
- Announcements
- Grades
- Discussions
- People
- BigBlueButton
- Chat

## Recent Announcements







- 
**You're Invited! SME Webinar #4 with Dr. Nate Olson - Monday, March 4 at 6 p.m. CT**  
 Join us for our next NASA subject matter expert (SME) webinar with Dr. Nate Olson, at 6 p.m. CT on Monday, March 4. About...
 Posted on:  
Feb 26, 2024, 12:11 PM

## HAS Online 2023/2024



- View Course Stream
- View Course Calendar
- View Course Notifications

### To Do

-  **Reminder: SME Webinar #4 with Kelly Graham - Tonight at 5 p.m. CT** x  
 HAS Online 2023/2024  
 Feb 13 at 2:01pm
-  **NASA SME Webinar #4 with Kelly Graham** x  
 HAS Online 2023/2024  
 Feb 13 at 5pm
-  **Choosing a Landing Site - Asteroid Belt** x  
 HAS Online 2023/2024  
 80 points |  
 Feb 16 at 11:59pm
-  **Choosing a Landing Site - Europa** x  
 HAS Online 2023/2024  
 80 points |  
 Feb 16 at 11:59pm
-  **Choosing a Landing Site - Titan** x  
 HAS Online 2023/2024  
 80 points |  
 Feb 16 at 11:59pm
-  **Choosing a Landing Site - Mars** x  
 HAS Online 2023/2024  
 80 points |  
 Feb 16 at 11:59pm





# Learning Management System



HAS Online 2023/2024 > Grades ←

Gradebook ▾ 📄 Import 📄 Export ▾ ⚙️

Student Names Assignment Names

Student Name	Mod 1 - Resources Qui Out of 12	DB- Getting to Know Out of 20	EDN- Setup Out of 20	EDN- CAD Lego Sketch an Out of 50	Introduction to Coding Out of 50	Engineering Design Challei <b>UNPUBLISHED</b>	Perseverance Parachute C Out of 20	Binary Quiz Out of 9
	12	DB- Getting to Know You 20	20	50	50		20	9
	12	20	20	50	50		10	9
	12	20	20	50	50		20	9
	12	20	20	37.5	50		20	9
	12	20	15	32.5	42.5		13	9
	12	20	20	50	50		20	9
	12	20	20	50	50		20	9
	12	20	20	50	50		20	9
	12	20	20	50	50		16	9
	12	20	17	50	50		20	9
	12	20	20	45	45		20	9
	12	20	20	50	50		20	9
	12	20	20	50	25		20	9
	12	20	20	50	50		14	6.3
	12	20	20	50	50		20	9

←



# NASA STEM: Citizen View

Element: *Connect with Peers and  
NASA Resources*

Status: *Deployed*

## STEM Functional Mapping



## Citizen Benefits

As a citizen educator having a moderated environment where I can not only access NASA STEM content but also interact with NASA personnel and my peers to learn how to best utilize that content in my classroom is beneficial to my ability to teach. My ability to create, save, and share personalized collections of content saves valuable time.





Welcome Douglas,  
Catch up on **CONNECTS** announcements!

**NASA EPD**  
Educator Professional Development

CLICK HERE TO LEARN MORE!

**NASA EPD**  
Educator Professional Development

### NASA's Educator Professional Development

NASA's Educator Professional Development (EPD) offers free virtual and in-person presentations and workshops to pre-service, formal, and informal educators about the ever-expanding catalog of NASA STEM content and products. NASA EPD is here to help build both your and your students' STEM identities with hands-on activities for your classroom. Make real life connections between your lessons and NASA's missions, all while using current pedagogical practices and focusing on diversity and cultural relevance!



### Ask the Community

CONNECTS community members and NASA experts can help answer your questions.

Ask the Community

### Browse Collections

Explore the latest collections of NASA resources from the CONNECTS community.

Browse Collections

### NASA's Next Gen STEM Commu...







Welcome to NASA CONNECTS



# Resource Library

Topics contain resources including discussions, articles, lesson plans, professional learning opportunities, and more to help educators collaborate, learn about NASA subject matter, and engage in authentic STEM experiences. When participating in a discussion, please follow our community guidelines.

**Featured Topics** All Topics

 <p><b>News &amp; Events</b></p>	 <p><b>Humans in Space</b></p>	 <p><b>Missions</b></p>
 <p><b>Science &amp; Research</b></p>	 <p><b>Earth &amp; Climate</b></p>	 <p><b>Solar System</b></p>

### Topics You Follow

No Topics Found

### Suggested For You

- [Elementary School](#)
  - [Let's Meet! CONNECT-ing](#)
  - [Landsat Educational Activities](#)
  - [Sound Effects Hands-on Activity](#)
  - [NASA SPARX: Out-of-This-World Adventures](#)
  - [Think Like an Engineer](#)
- View All (20+)
- [Middle School](#)
  - [Let's Meet! CONNECT-ing](#)
  - [Propulsion with Space Launch System](#)



## Solar System

Resources **Collections**

Search...  
-- Filter by Topic --

Match All Topics

Sorted By

Created Date

Intended Audience

Choose Audience

Create New Collection

12  
Followers

161  
Posts

123  
Articles

Follow

### Trending Articles

[The Astro-Not-Yets Explore Energy Storybook](#)

[Missed Messages: Space Communications and Navigation Classroom Activity](#)

[Eclipse Resource Kit](#)

[2023 Annular Eclipse Activities](#)

[Catching a Whisper from Space](#)

**NASA Eclipses**  
Created By: Moderator Rosie Marsh  
23 7 9/26/23  
Resources to help educators prepare for the October 14, 2023 annular solar eclipse and the...  
Earth & Climate  
+ more

**Space Radiation**  
Created By: John Wilson  
0 2  
Space radiation is one of the greatest threats in our solar system! There are different kinds,...  
Galactic Cosmic Radiation  
+ more

**Comets**  
Created By: John Wilson  
0 2  
The study of comets and cometary physical parameters is of great importance to understand...  
JPL  
+ more

**Remote Sensing**  
Created By: Randi Neff  
0 1  
Resources to teach students how to interpret images from various satellites.  
Remote Sensing  
+ more



INFORMAL EDUCATION

# Eclipse Resources for Informal Educators - Preparing for the 2023 Annular and 2024 Total Solar Eclipse

Safety, multimedia, activities, and viewing guidance for the annular solar eclipse coming to the Americas on October 14, 2023 and the total solar eclipse on April 8, 2024.

Oct 4, 2023 · Knowledge

Content



Image source

Last updated 10/3/23 - Added NASA 2023 Eclipse Explorer - an interactive look at the upcoming eclipses with a map and simulated views from across the country.

A total solar eclipse is coming to the Americas on April 8, 2024 ; the previous one, in 2017, can serve as an example of how to safely celebrate it. The next such opportunity in the US won't be until 2045.

There will also be an annular solar eclipse on October 14, 2023 visible in the Americas. In both an annular and total solar eclipse, the Moon passes in front of the Sun from Earth's perspective. In an annual solar eclipse, however, the Moon is further from the Earth, and does not block out the entirety of the Sun.

Official NASA resources: Two solar eclipses will cross the United States in 2023 and 2024. On October 14, 2023, an annular solar eclipse will create a "ring of fire" in the sky from Oregon to Texas. On April 8, 2024, a total solar eclipse will darken the skies from Texas to Maine. On both dates, all 48 contiguous states in the U.S. will experience at least a partial solar eclipse. A map developed using data from a variety of NASA sources shows both eclipse paths as dark bands. Outside those paths, yellow and purple lines show how much of the Sun will become blocked by the Moon during the partial eclipses.

- NASA Eclipse Website - contains activities, safety information, exact timings/locations for October and April, and much more.

Add To Collection

Follow

Files (0)

### Related Resources

- Getting Ready for the Upcoming Annular Solar Eclipse 106
- Watch the Total Solar Eclipse in Australia! 32
- What is an Annular Solar Eclipse? 52
- 2023 Annular Eclipse Activities 125
- Eclipse Resource Kit 208

### Trending Resources

- 3, 2, 1... Take Off (Simple K-5)
- Eclipse Resources for Informal Educators - Preparing for the 2023 Annular and 2024 Total Solar Eclipse
- It's Meme Monday: Learn about STELLA
- Mapping Invisible Forces Hands-On Activity for Informal Educators
- Senses of Sound Hands-On Activity

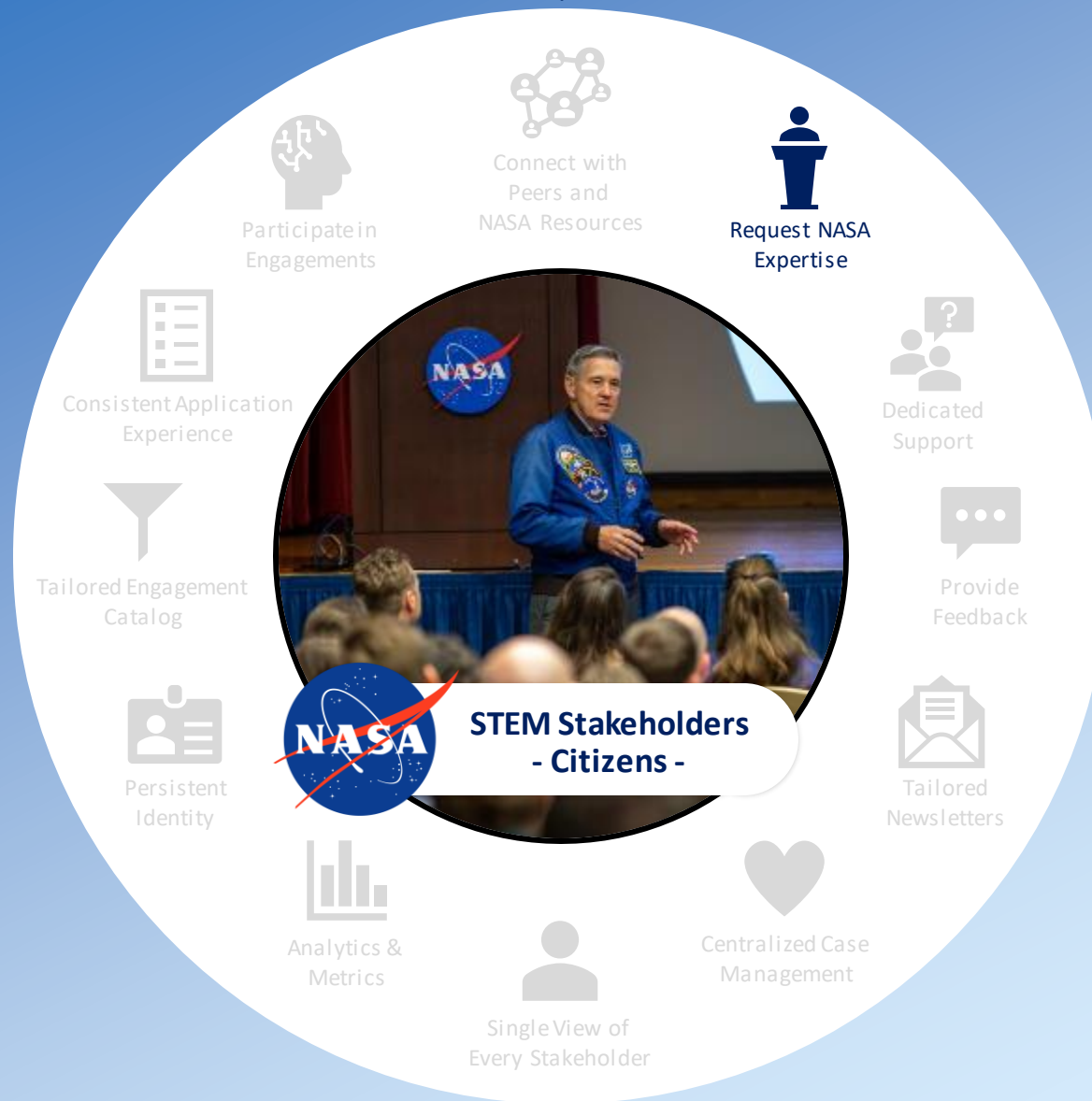
# NASA STEM: Citizen View

Element: Request NASA Expertise

Status: In Pilot Phase – Full  
Deployment Q2, FY24

## STEM Functional Mapping

**NASA Expert &  
Public Request  
Management  
(NASA Engages)**



## Citizen Benefits

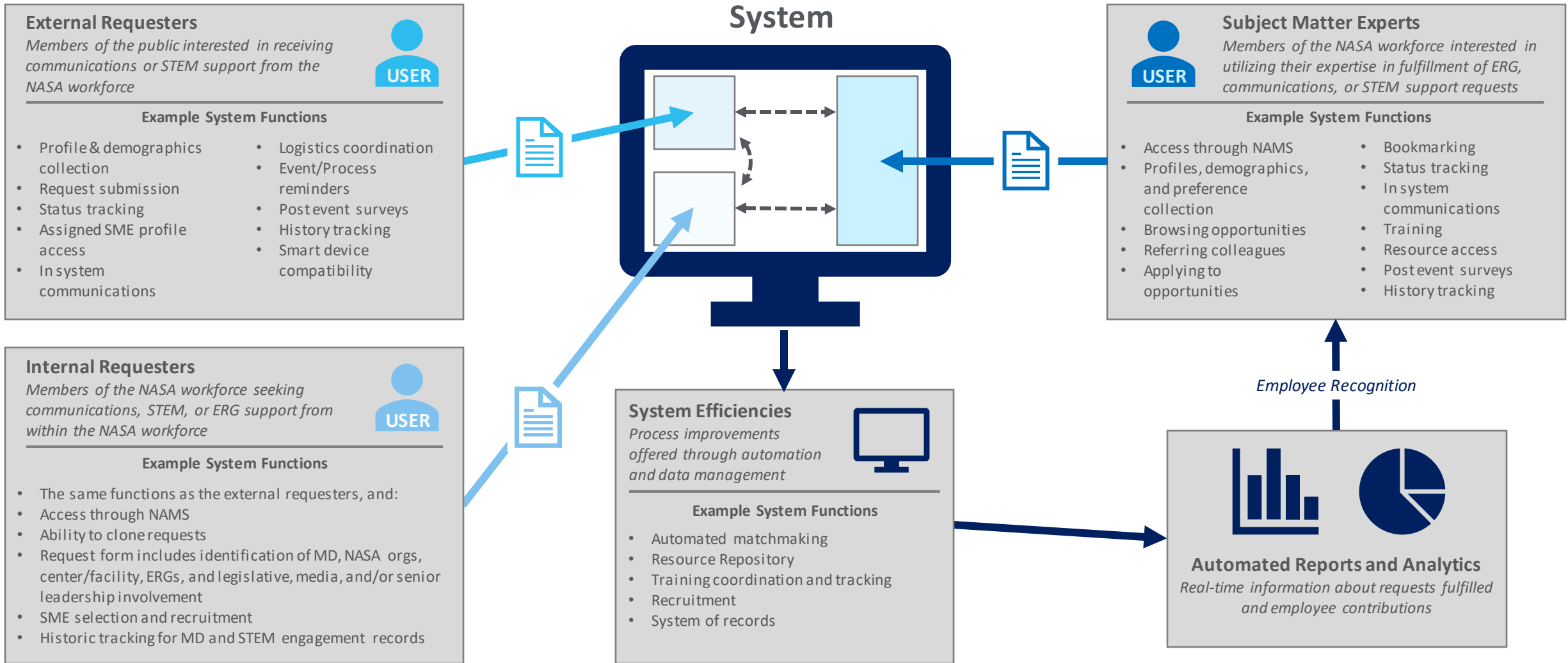
As a citizen a single location where I can request expertise from NASA will minimize the “who you know” and cold-call factors that were challenging in the past. The ability to track the status of my requests, learn more about the experts assigned to my requests, and to review the history of past requests in one location are also benefits of this new process.







# Request NASA Expertise (NASA Engages)





# Request NASA Expertise (NASA Engages)



## NASA Engages Analytics Dashboard

Investigate, analyze, and derive insights with **REAL-TIME MONITORING** of data collected from internal & external requests for NASA Experts tracked within NASA Engages. The filters up top and all the values in the charts below are interactive, allowing you to deep dive into specific datasets to gain more focused insights.

### DASHBOARD FILTERS

**REQUEST FILTERS:** Coordinator All, Fiscal Year All, Status All, Disposition All, Importance All, Record Type All

**EXPERT FILTERS:** Expert Name All, Expert Employer All, Expert Assigned Center All, Expert Org Code All, Expert Mission Directorate All

**EVENT FILTERS:** Format All, Request Type All, Audience Type All, Event State All, External Requester Org All, Internal Requester Center All, Internal Requester Org All

### TOTAL REQUEST COUNTS

858

Requests Submitted

1,230

Roles Requested

### TOTAL FULFILLMENT COUNTS

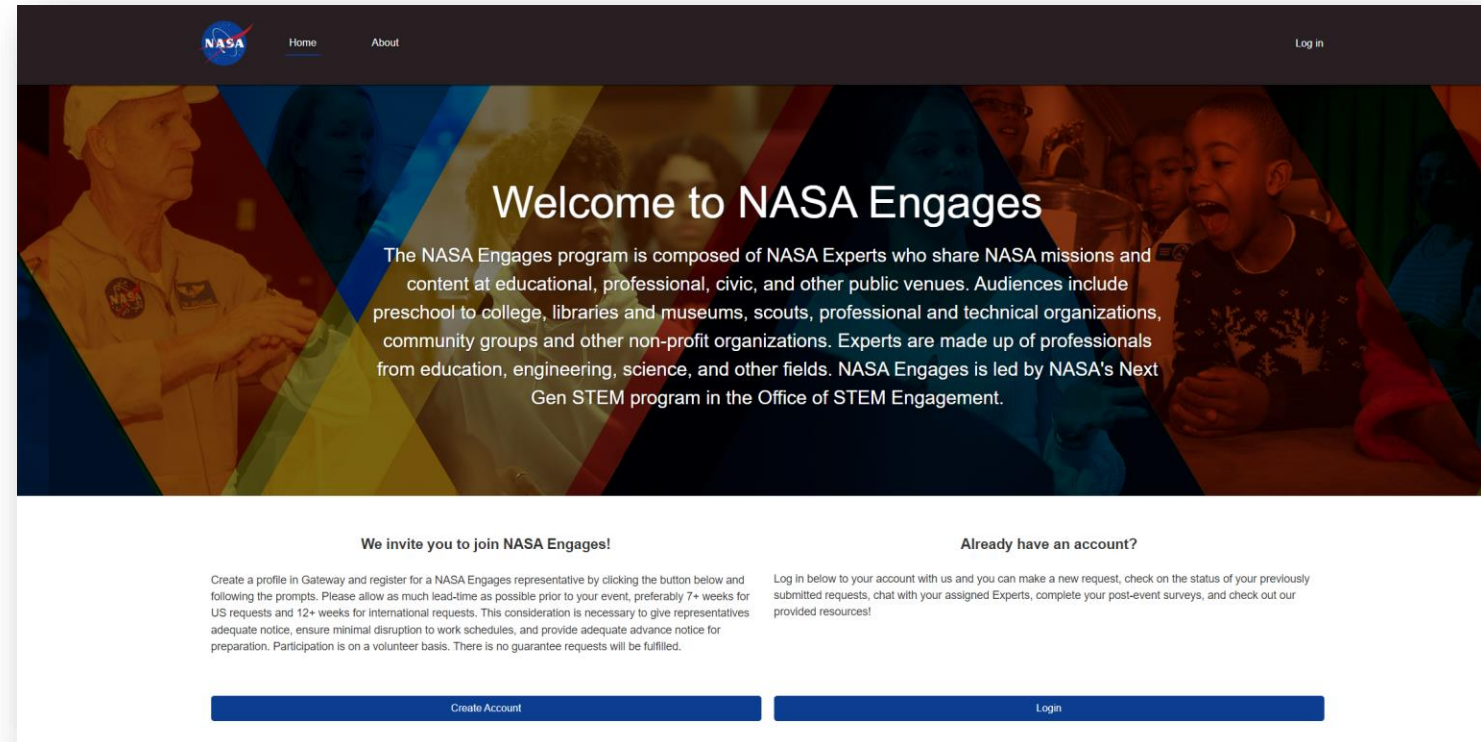
240

Requests Fulfilled



## By the Numbers

- Total number of requests received: **858**
- Number of requests active: **199**
- Number of requests fulfilled: **240**
- Number of participants reached based on survey feedback: **61,373**
- Number of "Experts" with a profile: **1,002**
- Number of coordinators: **13**



## Developed in collaboration with:

- OCOMM/Speaker's Bureau
- ESDMD/SOMD
- ARMD
- SMD
- STMD
- ODEO
- OCHCO/Recruitment Ambassadors
- Solar System Ambassadors



# NASA STEM: Citizen View

Element: *Dedicated Support*

Status: *In Development –  
Deployment Q2, FY24*

## STEM Functional Mapping



## Citizen Benefits

As a citizen having a location to go for help, within the same system where I am already interacting with NASA makes life much easier. The ability to track the status of my open help requests and to see case history also helps me to feel heard and valued. Additionally, the ability to access FAQs and knowledge articles can potentially allow me to answer my own questions without having to wait for a response from NASA.



# NASA STEM: Citizen View

Element: Provide Feedback

Status: In Discovery –  
Targeted Deployment Q3, FY24

## STEM Functional Mapping



## Citizen Benefits

As a citizen being presented with the opportunity to provide feedback at key stages within my interactions with NASA, rather than months after the conclusion of activities, allows me to better convey my thoughts while they are fresh. Additionally, by prepopulating the surveys with the information that NASA already knows about me, I can focus more on the outcomes of my experience and less on the administrative information for NASA.



# NASA STEM: Citizen View

Element: Tailored Newsletters

Status: Discovery

## STEM Functional Mapping



## Citizen Benefits

As a citizen receiving newsletters that highlight content related to my goals and interests without me having to sort through irrelevant (to me) items saves me time and increases the likelihood that I will read the newsletter.





# Tailored Newsletters



Current State

**NASA EXPRESS YOUR STORY**

Make a STEM Connection: Psyche Mission

NASA's [Psyche mission](#) is set to launch on an unprecedented journey to a metal-rich asteroid. This unique asteroid – also named Psyche – is believed to be the remnant of a planet's core. Get ready for the launch window on **Thursday, Oct. 12**, by making a STEM connection with these resources:

- Lessons and More Psyche Teachable
- Ways to Get Involved Psyche Opportunities
- Latest Mission News Psyche News

## Professional Development Opportunities

**Virtual GLOBE Observer Event: Annular Solar Eclipse**  
 Audience: K-12 educators  
 Webinar Date: Thursday, Oct 5, at 8 p.m. EDT  
 Contact: [hollie.kohl@nasa.gov](mailto:hollie.kohl@nasa.gov)

What happens on Earth when the Sun goes dark during an eclipse? Join the GLOBE (Global Learning and Observations to Benefit the Environment) Observer team to find out. Atmospheric scientist Jason (Brant) Dodson from NASA's Langley Research Center joins Henry (Trae) Winter and MaryKay Severance from the University of Colorado Boulder to answer your questions about how eclipse changes Earth's atmosphere and how animals respond to these changes. The discussion will help you prepare to make your own observations during the annular solar eclipse that will be visible in North and South America on Saturday, Oct. 14.

**Professional Development Webinar – Bringing the 14 Annular Solar Eclipses to the Classroom**  
 Audience: K-12 educators  
 Event Date: Tuesday, Oct. 10, at 10 a.m. EDT  
 Contact: [hq-epd@nasa.gov](mailto:hq-epd@nasa.gov)

Are you ready for the 14th annular solar eclipse on Oct. 14 and the total solar eclipse on Oct. 15? Join an online professional development session to learn about the Earth-Moon system and the mechanics of how and why eclipses occur. Participants will receive hands-on STEM activities, plus heliophysics plans, eclipse demonstration ideas, safety guides, and more.

Registration closes on Monday, Oct. 9. [Click here](#) to register.

**Artemis ROADS II Professional Development Workshops**  
 Audience: Formal and informal educators of grades 3-12

The next "live" week begins on Monday, Oct. 9, with a solar eclipse theme to prepare for the upcoming annular solar eclipse.

[Click here](#) to register.

## Online Learning Opportunities

**Space Weather Explorers Week**  
 Audience: Educators and students in middle school and high school  
 Event Date: Monday, Oct. 9 - Friday, Oct. 13  
 Contact: [outreach@ssl.berkeley.edu](mailto:outreach@ssl.berkeley.edu)

Learn about heliophysics science and STEM careers with the new [Space Weather Explorers Week](#) website. Explore the website to find cool facts, games, and an online, interactive discussion board where your class or group can submit a question to leading space scientists.

The website also features educational activities formatted into a week-long course designed to complement "live" weeks that will take place several times per year. During these events, students will be able to interact with volunteer scientists, often from under-represented groups in science. The website and program will emphasize the importance of role models in science.

Join the GLOBE (Global Learning and Observations to Benefit the Environment) [Mission](#) to learn about the new Carbon and Climate's Grace Crain-Wright from the Implementation Office you can become involved in deeper understanding through data collected through protocols. She'll also share activities for use both in and out of the classroom.

Dr. Rusanne Low from the Global Environment will share how climate change is creating conditions for mosquito-borne diseases. [Click here](#) to register.

## Get Ready to Safely View Upcoming Eclipses

The Sun and Moon will work together to put on a celestial show for North America during two upcoming solar eclipses. On **Saturday, Oct. 14**, the Moon will nearly cover the Sun during an annular solar eclipse. On **Sunday, Oct. 15**, the Moon will completely block the Sun during a total solar eclipse. The most of these rare events with [NASA STEM learning resources](#) available, including activities, citizen science opportunities, and more.

## Are You Up for a Challenge?

**NASA MUREP Innovative New Designs for Space (MINDS)**  
 Audience: Students enrolled at Minority Serving Institutions  
 Application Deadline: Wednesday, Oct 18  
 Contact: [support@nasaminds.org](mailto:support@nasaminds.org)

The NASA MINDS program is seeking students from all fields of study at Minority Serving Institutions to help advance technologies needed for [NASA's Artemis mission](#). Artemis will return astronauts to the Moon and eventually send them to Mars.

Participating student teams will first learn about the Artemis Mission and the technologies NASA needs. They will then pick the technology of most interest to them, plan their detailed design concept, and receive feedback from NASA subject matter experts. Participating teams can receive recognition awards of up to \$5,000 in various categories and win a VIP trip to NASA's Kennedy Space Center in Florida.

**NASA TechRise Student Challenge**  
 Audience: Educators and students in grades 6-12  
 Entry Deadline: Friday, Oct. 20  
 Contact: [support@futureengineers.org](mailto:support@futureengineers.org)

## Opportunities With Our Partners

**2023 Environmental Education Grants**  
 Webinar Date: Thursday, Oct. 12, 1 - 2:30 p.m. EDT

**Solar Decathlon Design Challenge**  
 Registration Deadline: Wednesday, Oct. 18, at 5 p.m. EDT

[Share the Excitement of the Upcoming Solar Eclipses With Templates From Canva Space Explorers Available Now](#)

Want to subscribe to get this message delivered to your inbox each Thursday? Sign up for the NASA EXPRESS newsletter at <https://www.nasa.gov/stem/express>.

Are you looking for NASA STEM materials to support your curriculum? Search hundreds of resources by subject, grade level, type and keyword at <https://www.nasa.gov/learning-resources/search/>.

Find NASA science resources for your classroom. The NASA Science Activation (SciAct) program connects diverse learners of all ages with science in ways that activate minds and promote a deeper understanding of our world and beyond. <https://science.nasa.gov/learn>

Check out the "Explore NASA Science" website! Science starts with questions, leading to discoveries. Visit [science.nasa.gov](https://science.nasa.gov). To view the site in Spanish, visit [ciencia.nasa.gov](https://ciencia.nasa.gov).

Visit NASA STEM Engagement on the Web: NASA's Office of STEM Engagement: <https://stem.nasa.gov> NASA Kids' Club: <https://www.nasa.gov/kidsclub>



**NASA STEM** INSPIRE - ENGAGE - EDUCATE - EMPLOY  
The Next Generation of Explorers



[stem.nasa.gov](https://stem.nasa.gov)

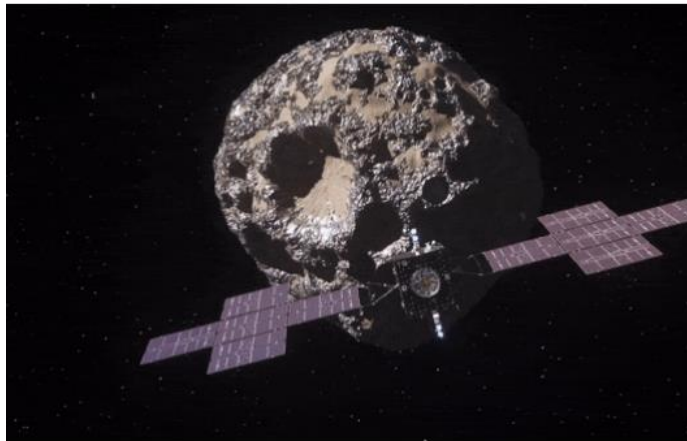


# Tailored Newsletters



Envisioned State

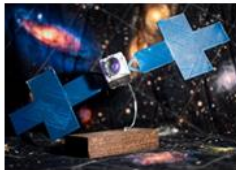
## Make a STEM Connection: Psyche Mission



NASA's [Psyche mission](#) is set to launch on an unprecedented journey to metal-rich asteroid. This unique asteroid – also named Psyche – is thought to be the remnant of a planet's core. Get ready for the launch window to open on **Thursday, Oct. 12**, by making a STEM connection with these resources:



Lessons and More [Psyche Teachable Moment](#)



Ways to Get Involved [Psyche Opportunities](#)



Latest Mission [Psyche Blog](#)

## Continue Where You Left Off



Posted 10 minutes ago Registration ends 8/30/23  
**Mars Reconnaissance Team Internship**  
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Challenges Virtual Students College US Citizen Only



Posted 10 minutes ago Registration ends 8/30/23  
**Earth Observations to Manage Wildfire Risk**  
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Challenges Virtual Students College US Citizen Only

## Bookmarked and Recommended Items



Posted 10 minutes ago Registration ends 8/30/23  
**Ecological Conservation Mars Support: Outreach & Communications**  
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Challenges Virtual Students College US Citizen Only



Posted 10 minutes ago Registration ends 8/30/23  
**Ecological Conservation Mars Support: Outreach & Communications**  
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Challenges Virtual Students College US Citizen Only



Posted 10 minutes ago Registration ends 8/30/23  
**Mars Reconnaissance Team Internship**  
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Challenges Virtual Students College US Citizen Only

## Items That Align to Your Profile

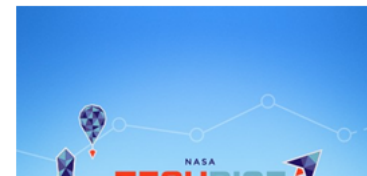
### [NASA MUREP Innovative New Designs for Space \(MINDS\)](#)

**Audience:** Students enrolled at [Minority Serving Institutions](#)  
**Application Deadline:** Wednesday, Oct. 18  
**Contact:** [support@nasaminds.org](mailto:support@nasaminds.org)

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Participating student teams will first learn about the Artemis Mission and the technologies NASA needs. They will then pick the technology opportunity of most interest to them, plan their detailed design concept, and receive \$1,500 towards the building of their project to be presented to NASA subject matter experts. Participating teams can receive recognition awards of up to \$5,000 in various categories and win a VIP trip to NASA's Kennedy Space Center in Florida.



### [NASA TechRise Student Challenge](#)

**Audience:** Educators and students in grades 6-12  
**Entry Deadline:** Friday, Oct. 20  
**Contact:** [support@nasaminds.org](#)



**NASA STEM** INSPIRE - ENGAGE - EDUCATE - EMPLOY  
The Next Generation of Explorers



[stem.nasa.gov](http://stem.nasa.gov)



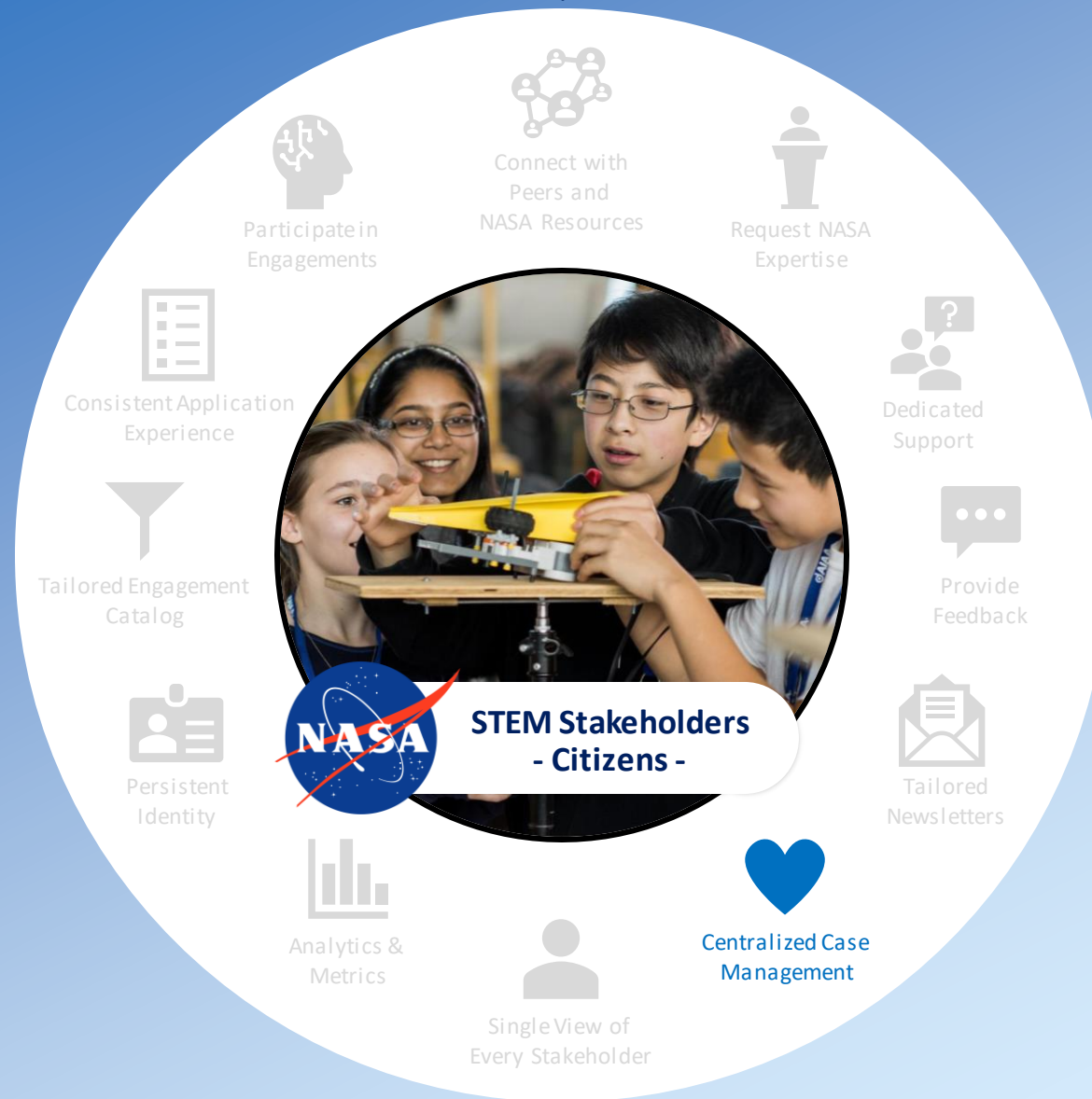
# NASA STEM: Citizen View

Element: Centralized Case Management

Status: In Development – Deployment Q2, FY24

## STEM Functional Mapping

Knowledge Articles, In-line Help, & Case Management



## NASA Benefits

As NASA, having functionality directly in the environments where citizens are working that allows them to submit help tickets allows for better interactions between the help desk team members, developers, and the citizens seeking help. The improved ability for NASA to identify reoccurring issues and then prevent them with system enhancements or knowledge articles provides a better overall experience for citizens.



# NASA STEM: Citizen View

Element: Single View of Every Stakeholder

Status: Deployed

## STEM Functional Mapping



Foundational – instrumental in allowing all other functions



## NASA Benefits

As NASA, having a single view of every stakeholder and the institutions that they represent allows us to better understand the current nature of our relationships and provides an improved ability to strategically strengthen relationships over time. Consolidating records into a single locations allows us to be more responsive to citizen inquiries – ultimately giving them a better experience overall.



Completion of your Demographic Information is voluntary.  
No selection decisions are made based on the information. It will not adversely affect your application if you choose to not provide this information. Select the 'Do not wish to provide' option for each item that you choose not to report on.

### Details

**Contact Details**

Name	[Redacted]	Academic Institution	Boise State University
Birthdate	S/[Redacted]	GPA	[Redacted]
Account Name	[Redacted] <a href="#">Account</a>	School does not use GPA	<input type="checkbox"/>
UUPIC		Citizen Status	United States Citizen
Contact Type	Students	Country of Origin	
Apply for Minor	<input type="checkbox"/>		

**Consent**

Consent	Consent Provided	Survey Participation Consent	Yes
Media Release Consent	Yes	Opt In SMS	<input type="checkbox"/>
Contact (Parent/Guardian)		Parent Contact Email	

**Education Type**

Student Education Type	Graduate	Educator Education Type	
Grade Level	Graduate Master's	Informal Educator	
Enrollment Status			

**Contact Information**

Email	[Redacted]@u.boisestate.edu	Home Phone	
Alternate Email		Work Phone	
Mobile	[Redacted]	Other Phone	
Preferred Phone	Mobile Phone		

**We found no potential duplicates of this Contact.**

**Related** Activity Chatter

**Requests (0)**

**Applications (Applicant) (3+)**

- APP-1155839  
Application Type:  
Applying To:  
Application Status: Not Selected
- APP-1155398  
Application Type:  
Applying To:  
Application Status: Not Selected
- APP-1155807  
Application Type:  
Applying To:  
Application Status: Not Selected

[View All](#)

**Course Connections (3+)**

- CC-3921  
Course Offering ID: Single Aisle Hybrid Plane in VR - Virtual  
Session: Intern: Spring 2022  
Project Account: NASA Internships
- CC-5014  
Course Offering ID: 2022 SUITS Challenge  
Session: SUITS 2022  
Project Account: HEOMD
- CC-7826  
Course Offering ID: Single Aisle Hybrid Plane in VR - Virtual  
Session: Intern: Summer 2022  
Project Account: NASA Internships

[View All](#)

**Contact** [Redacted]

**Address Information**

Mailing Address	[Redacted] Boise, Idaho 83709 United States	Other Address	[Redacted]
Primary Address Type		Secondary Address Type	

**System Information**

Last Modified By	[Redacted] 10/1/2023, 8:51 PM	Created By	Strivalli Valipe 9/16/2021, 9:34 AM
Contact Record Type		Learner	

+ Follow | Add Transcript | Edit | Get Survey Invitation

**Post-Event Surveys (0)**

**Addresses (2)**

- A-17110
- A-62944

[View All](#)

**Contact Languages (0)**

**Recommendations (3+)**

- Recommendation: APP-836737 [Redacted]  
Application: APP-836737  
Institution: [Redacted]  
Position: BSU NASA Microgravity Advisor
- Recommendation: APP-836737 [Redacted]  
Application: APP-836737  
Institution: [Redacted]  
Position: Professor of Advanced Game Dev
- Recommendation: APP-836737 [Redacted]  
Application: APP-836737  
Institution: [Redacted]  
Position: Scientific Computing and Graphics Team Lead

[View All](#)

**Student Majors (3+)**

- SM-432932
- SM-432933
- SM-432879

[View All](#)

**Student Skills (3+)**

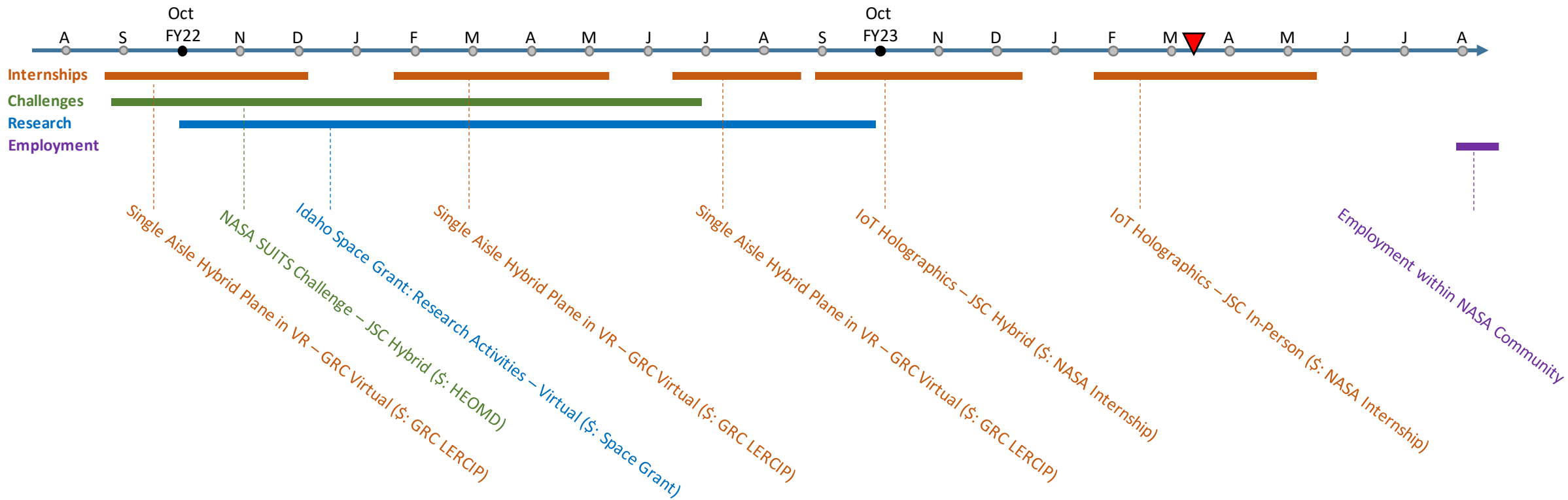
- Skill-2738852  
Skill / Attribute: HTC Vive  
Description: [Redacted]

# Persistent Identity



## NASA STEM Pathway Example: "Student X" - real scenario

No data call needed – information pulled directly from NASA STEM Gateway




Unit ID	Type	Primary Sub-Type	Legislative District	Data Source	Billing Address
225511	Higher Education Institutions		TX, District 18		212 E. Cullen Building Houston, Texas 77204-2018 United States

Account Name	University of Houston	Parent Account	
Alias(es)	UH	Unit ID	225511
Type	Higher Education Institutions	OPEID	365200
Primary Sub-Type		DUNS	36837920
Status of Institution	Open	UBI	
Data Source		Cage Code	

**Contact Information**

Bypass Address		Phone	(713) 743-1000
Billing Address	212 E. Cullen Building Houston, Texas 77204-2018 United States	Phone Extension	



Website	www.uh.edu/
Consortium	

**Characteristics**

Accrediting Agency	None	Peil Eligible	Yes
Carnegie Doctoral Classification	Doctoral Universities: Very High Research Activity	Peil Recipients	14,793
New T 3/5 Eligible	Yes	Peil Percentage	40%
Eligible/Current Grant	Yes	Peil Threshold	37

**Academic Details**

**We found 3 potential duplicates of this Account.**  
[View Duplicates](#)

**Related** Activity Chatter News

**MSI (3+)**

MSI-4632	AANAPISI
MSI Type:	FY24
Fiscal Year:	
Data Source:	
MSI-5100	HSI
MSI Type:	FY24
Fiscal Year:	
Data Source:	
MSI-3751	AANAPISI
MSI Type:	FY23
Fiscal Year:	
Data Source:	

[View All](#)

**Institution Members (3+)**

Contact Type:	Students
Student Education Type:	Undergraduate
Educator Education Type:	
Contact Type:	Students
Student Education Type:	Undergraduate
Educator Education Type:	
Contact Type:	Students
Student Education Type:	Undergraduate
Educator Education Type:	



Search...

Navigation icons: star, plus, home, help, settings, notifications, profile

Account University of Houston

+ Follow Edit New Opportunity New Lead

Academic Details

MSI Status	Yes	Institution Level	
Type & Control	Public, 4-year or above	Lowest Level/Grade Offered	
School District		Highest Level/Grade Offered	

Location Information

Locale	City	Legislative District	TX, District 18
Location		County	

Title I

School-wide Title I		Title I Eligible School	
Title I School Status		National School Lunch Program	
Free Lunch Eligible		Direct Certification	
Reduced-price Lunch Eligible Students		Free and Reduced Lunch Students	

Enrollment Demographic & Disability Info

Total Students	46,324	Total Males	22,958
Total Male %		Total Females	23,366
Total Female %		Disability %	<=3%
American Indian or Alaska Native Total	69	American Indian or Alaska Native %	
Asian Total	9,612	Asian %	
Black or African American Total	4,511	Black or African American %	
Native Hawaiian/Pacific Islander Total	54	Native Hawaiian/Pacific Islander %	
Hispanic or Latino Total	14,725	Hispanic or Latino %	
White Total		White %	
Two or More Races Total		Two or More Races %	
Est. Ann. Attendance / Enrollment			

System Information

Educator Education type: View All

Engagement Affiliations (3+)

- ENAF-0005191  
Type: Participating Institution  
Engagement Opening:  
Application: APP-1241168
- ENAF-0005213  
Type: Participating Institution  
Engagement Opening: Meg Smoke test Opening - DO NOT USE  
Application:
- ENAF-0005346  
Type: Lead Institution  
Engagement Opening:  
Application: APP-1271879

View All

Accounts (School District) (0)

Addresses (0)

Notes (0)

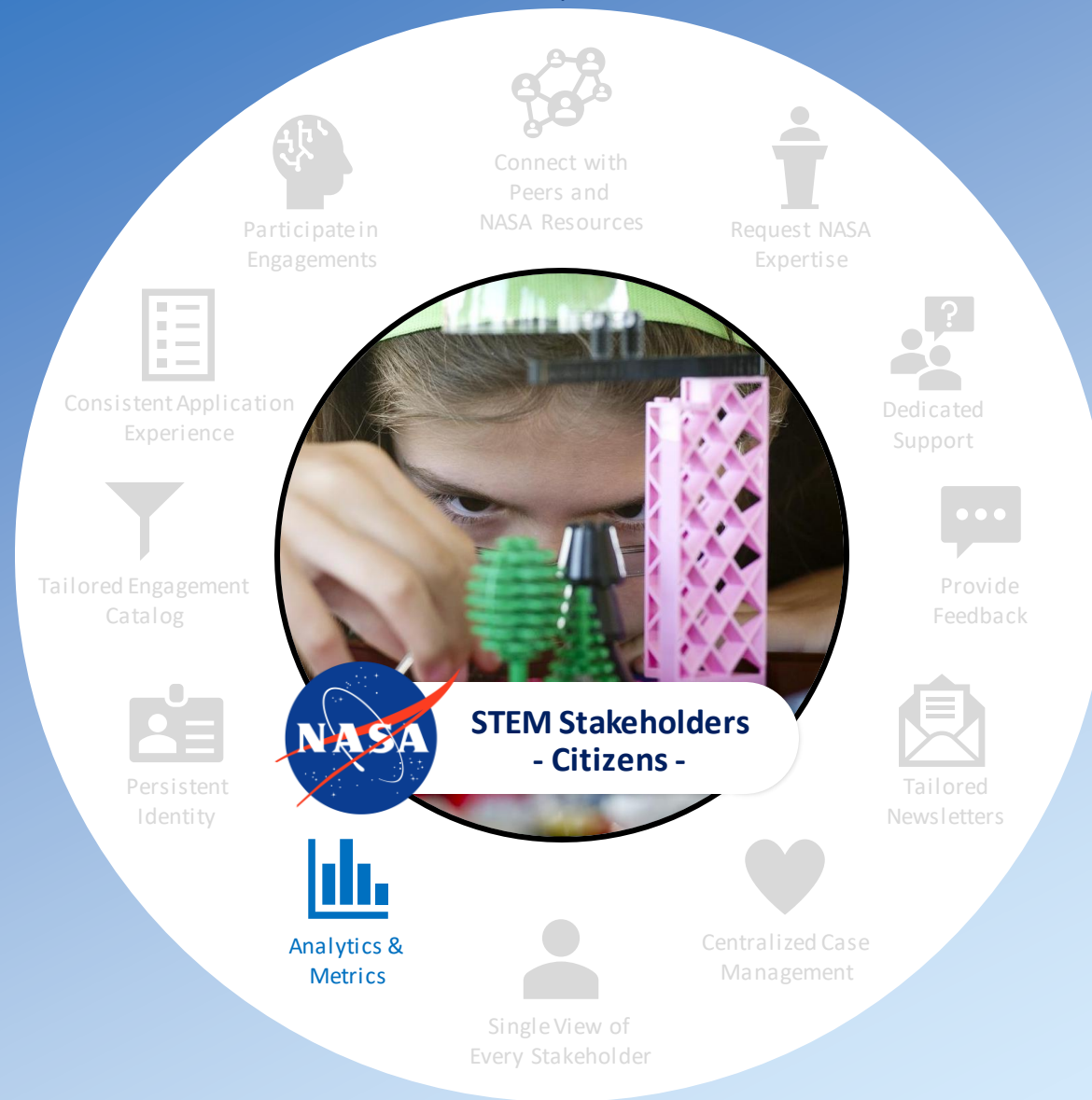
# NASA STEM: Citizen View

Element: Analytics & Metrics

Status: Deployed

## STEM Functional Mapping

Post Event  
Surveys and  
Project  
Evaluation Tools



## NASA Benefits

As NASA, having the ability to visualize data patterns and trends in a real-time manner allows NASA to adjust throughout the year of execution to arrive at better results. Similarly, we can quickly and efficiently respond to data calls without requesting manual inputs from 100+ team members. In addition to using dashboards to fulfill reports, we are also using them within operation workflows to help identify strong candidates for opportunities.







# Analytics & Metrics



1

2

3

4

5

6

7

1

## Filters

- Participant Type
- FY
- Session
- Project
- Managing Org/Center
- Delivery Type
- Activity Type
- Institution
- Engagement Type
- Engagement
- Engagement Opening

2

## Engagement Lenses

- Engagement Types by FY
- Engagements by FY
- Openings by FY
- Mission Directorate Content

3

## Participant Lenses

- Heat Map by Home Address
- Grade Level / Educator Type
- Disability Status
- Veteran Status
- Gender
- Ethnicity
- Race
- Underrepresented Race
- Underrepresented Learner

4

## Institution Lenses

- Heat Map by Institution Address
- Legislative Districts
- Rural vs. Urban
- MSI
- Higher Education Type

5

## Award Lenses

- Award Amounts
- Contact Hours

6

## Internship/Fellowship Lenses

- Org Code
- Funding Source

7

## Participant Rows

- Reference Data





Engagement Opening  
**AR/VR for Science and Engineering**

- + Follow
- Submit For Approval
- Make Offer
- Assign Deliverable List
- New Note
- Edit
- Clone
- Application Report
- Create Survey Link

Course: Internships - GSFC | Record Type: Internships | Term: Intern: Summer 2024



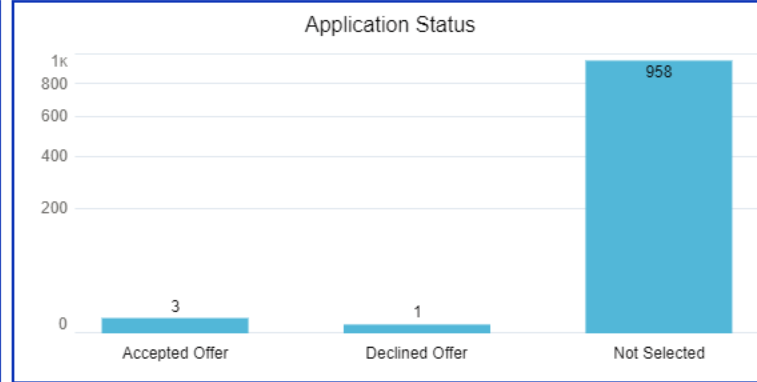
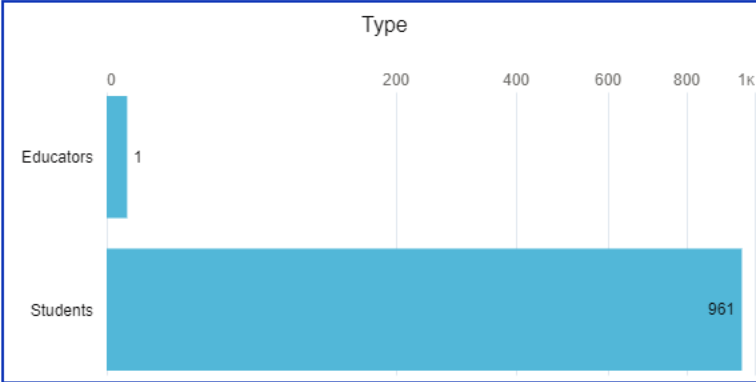
- Details
- Applications
- Participants
- Dashboard**
- Help

Internships 1 ▾

Data updated: Today at 6:18 PM

Applications Submitted: **962**

Only show results for applicants from Minority Serving Institutions (MSI's) | Select Minimum GPA (Includes Schools that do not use GPA) | All ▾



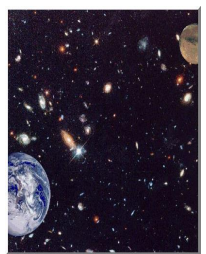
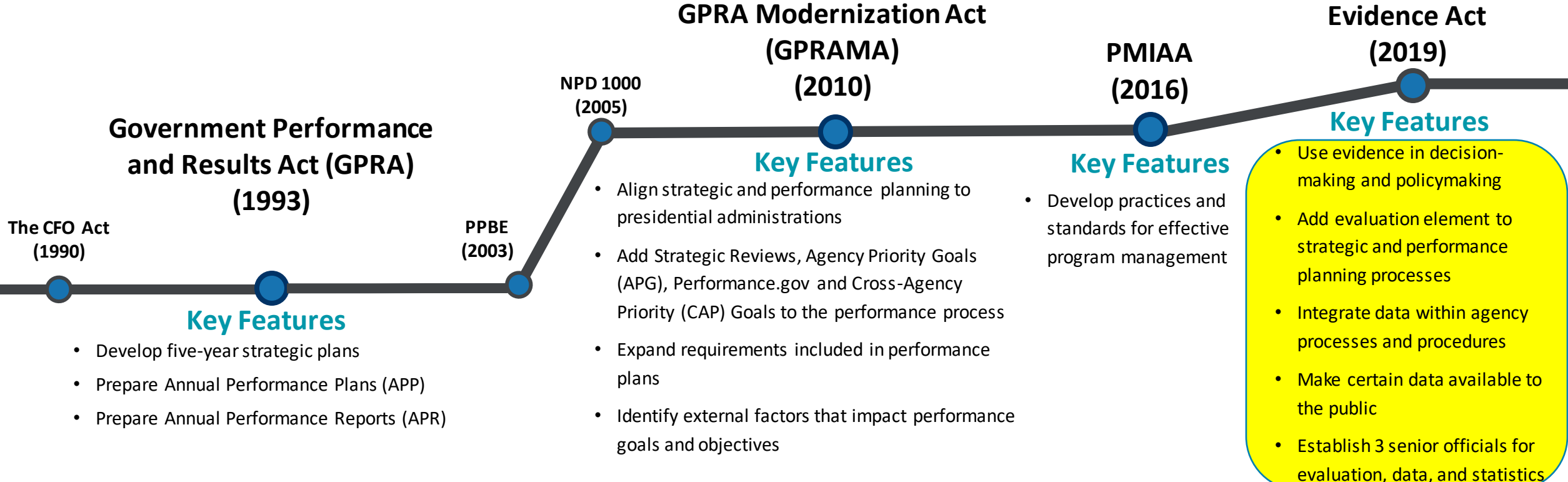
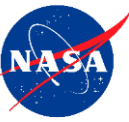
Grade Level / Educator Type

Details | Institution State

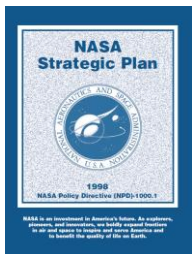
- Related**
- Chatter

- Notes (0)
  - Engagement Opening Languages (0)
  - Engagement Opening Skills (0)
  - Engagement Affiliations (0)
  - Applications (3+)
    - APP-1463639  
Application Status: N  
Applicant: Ai  
Ranking:
    - APP-1470600  
Application Status: N  
Applicant: Ai  
Ranking:
    - APP-1268746  
Application Status: N  
Applicant: Ai  
Ranking:
- [View All](#)

# Evolution of Performance Planning, Reporting, & Management



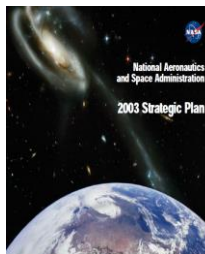
1996



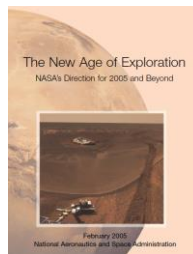
1998



2000



2003



2005



2006



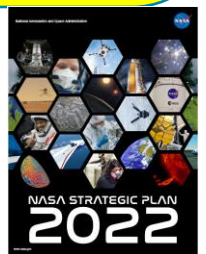
2011



2014



2018



2022

# Agenda



- 10:00 AM Welcome & Introductions
- 10:15 AM NASA STEM Engagement Updates
- 10:45 AM Aeronautics Research Mission Directorate – STEM Engagement Update
- 11:00 AM Partnerships (Priority Area 2)
- 11:30 AM Break (10 minutes)
- 11:40 AM STEM Gateway (Priority Area 3)
- 12:30 PM Lunch**
- 1:00 PM STEM Impacts (Priority Area 4)
- 1:30 PM Generation of Findings and Recommendations
- 3:00 PM Adjourn Meeting





**Lunch**

# Agenda



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# Priority Area 4: STEM Impacts

## NASA Performance Assessment & Evaluation

### STEM Engagement Impacts Webpage

NAC Meeting

June 18, 2024

# Comprehensive Performance Assessment & Evaluation Strategy



## STRATEGIC PERFORMANCE FRAMEWORK

- Broad strategic goals designed to advance NASA's mission and address relevant national problems, needs, challenges and opportunities.
- Timeframe: 2022 - 2026
- Ongoing monitoring and reporting of program accomplishments, particularly progress toward pre-

PERFORMANCE ASSESSMENT STRATEGY

EVALUATION STRATEGY

LEARNING AGENDA

## PERFORMANCE ASSESSMENT

- Includes outputs such as: demographics and number of paper presentations and peer-reviewed publications of higher education interns and fellows; and outcomes such as developing higher education students' science or engineering identity.
- Timeframe: Short term (Annual)

Annual Performance Indicators

## EVALUATION

- Systematic study using research methods to collect and analyze data to assess how well a program is working and why.
- Includes *outcomes* such as: developing higher education students' science or engineering identity, cognitive understanding of research processes and skills, or longitudinal study of interns.
- Timeframe: Long term

Learning Activities

LEARNING AGENDA





# STEM Engagement Strategic Performance Framework



## 2022 NASA Strategic Plan

Strategic Goal 4: Advance

Strategic Objective 4.3: Build the next generation of explorers  
*Engage students to build a diverse future STEM workforce*



Office of STEM Engagement



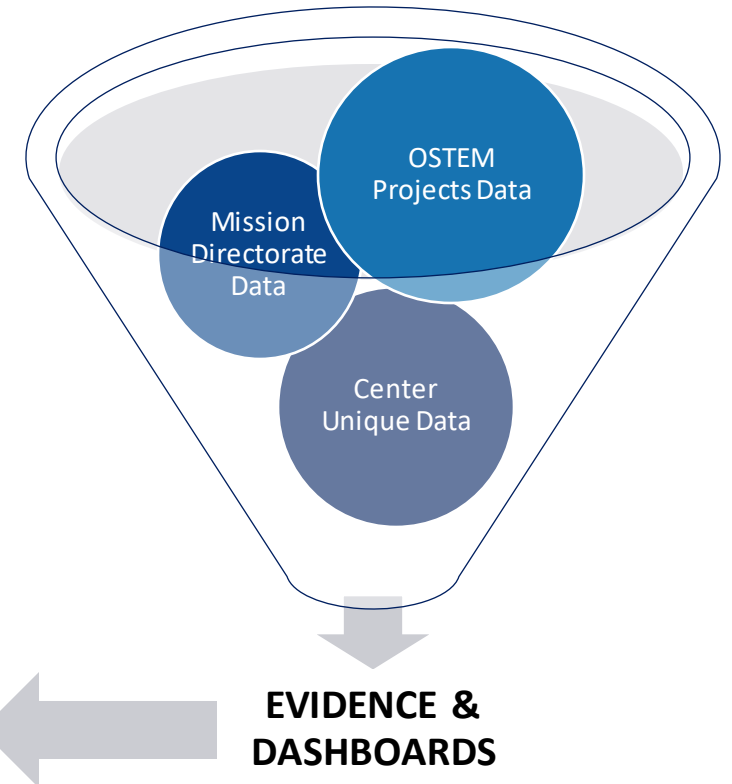
Performance Goals

Success Criteria

External

Internal

## NASA STEM Gateway Fiscal Year (FY) Closeout Performance Reporting Process



## Federal STEM Strategic Plan

Directs Federal agencies to operate with transparency and accountability in STEM initiatives (NSTC, 2018, p. 32):

- *Inventory and disseminate examples and templates, best practices, and lessons learned for effectively sharing program performance, data, and outcomes with stakeholders.*
- *Provide a public resource for monitoring Federal program performance and outcomes, such as a dashboard that visually tracks, analyzes, and displays common performance metrics.*




## Literature Review and Benchmarking Study

*To provide an evidence base to support the creation of NASA OSTEM's external P&E web presence.*

- The literature review was conducted to understand the core concepts and policies associated with accountability and transparency as they relate to Federal agencies' strategies for managing external access to data and research findings and sought to identify effective practices in creating a P&E external web presence.
- The benchmarking study examined how other US Federal agencies' publicly share P&E data, reports, and other artifacts.
- The objective of these activities was to inform the creation of a wireframe for OSTEM's external P&E web presence.

# Public Reporting Against the Strategic Plan (Agency-Level)



	Cadence	Contains products	Legislation / Strategic Directive	Key Components
Strategic Plan 	• Every 4 years	Strategic Plan	GPRAMA	<ul style="list-style-type: none"> <li>Vision</li> <li>Mission Statement</li> <li>Strategic Goals / Strategic Objectives</li> </ul>
		Learning Agenda	Evidence Act (EA)	<ul style="list-style-type: none"> <li>Priority Questions</li> </ul>
		Capacity Assessment	EA	<ul style="list-style-type: none"> <li>Evidence building capacity</li> </ul>
Volume of Integrated Performance (VIPer) 	• Annually	Annual Performance Report (APR)	GPRAMA	<ul style="list-style-type: none"> <li>Performance Goals</li> <li>Agency Priority Goals (APGs)</li> <li>Performance Results</li> <li>Annual Targets &amp; Milestones</li> </ul>
		Agency Performance Plan (APP)	GPRAMA	
		Strategic Review	GPRAMA	<ul style="list-style-type: none"> <li>Summary of Findings</li> <li>Summary of Progress by Strategic Objective</li> </ul>
		Annual Evaluation Plan (AEP)	EA	<ul style="list-style-type: none"> <li>Significant Evaluations</li> </ul>
Agency Financial Report 	• Annually	Agency Financial Report (AFR)	Financial / GPRAMA	<ul style="list-style-type: none"> <li>Summary of preliminary performance ratings and overview of performance highlights &amp; challenges by Strategic Goal</li> </ul>
	• Annually	<a href="#">NASA STEM Engagement Impacts Webpages</a>	Evidence Act (EA) / CoSTEM Strategic Plan	<ul style="list-style-type: none"> <li>OSTEM Learning Agenda</li> <li>Performance and Participant Data</li> <li>Evaluation Report Briefs</li> <li><b>NOTE: Released in September 2023</b></li> </ul>





# STEM Engagement Impacts



Scan the QR code to visit our impacts webpage



## STEM Reports

See what NASA STEM Engagement has accomplished



## Reach Map and Metrics

See where NASA STEM Engagement has reached learners



## Faces of STEM Engagement

Look Who's Interning



## STEM Engagement Resources

Search for STEM resources and opportunities





# ★ LIVE DEMONSTRATION



Scan the QR code to visit our impacts webpage



## STEM Reports

See what NASA STEM Engagement has accomplished



## Reach Map and Metrics

See where NASA STEM Engagement has reached learners



## Faces of STEM Engagement

Look Who's Interning



## STEM Engagement Resources

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# **Findings & Recommendations**



**Meeting  
Adjourned**



