

National Space Grant College and Fellowship Program (Space Grant)

Program-Level Independent Evaluation Opportunity

Kick-Off Meeting Webinar

October 29, 2020 – 2pm EST

NNH20ZHA006C



Agenda

Welcome, NASA Office of STEM Engagement (OSTEM) and Space Grant Overview

Dr. Erica J. Alston, Deputy Space Grant Manager, NASA Headquarters

Performance & Evaluation Overview

Rick Gilmore, Evaluation Manager, NASA Headquarters

Awardee Overview Presentations

Dr. Denise Thorsen, Alaska Space Grant Consortium, University of Alaska Fairbanks

Dr. Paulo Oemig, New Mexico Space Grant Consortium, New Mexico State University

Evaluation Technical Assistance

Dr. Vince Schiavone, Lead Evaluation Specialist, Paragon TEC, Inc.

Dr. Jocabed Marquez, Evaluation Specialist, Paragon TEC, Inc.

Questions

Questions



Please hold questions until the end of the session and place them in the chat box. **Be sure to identify the slide number/title.**

We will capture the questions and answers for reference purposes. The updated presentation will be shared via email.



OSTEM and Space Grant Overview



Vision

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

Mission

We engage students in NASA's mission

Strategic Goals

FOCUS AREAS



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



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



Strengthen **understanding of STEM** by enabling **powerful connections** to NASA's mission and work.

NASA Strategy for STEM Engagement 2020-23



The newly revised NASA Strategy for STEM Engagement 2020-2023 serves as a roadmap to frame and guide the agency's work to attract, engage and educate students and to support educators and educational institutions over the next 3 years.

Student Beneficiaries of NASA's STEM Engagement Portfolio



Elementary



Middle School



High School



Undergraduate

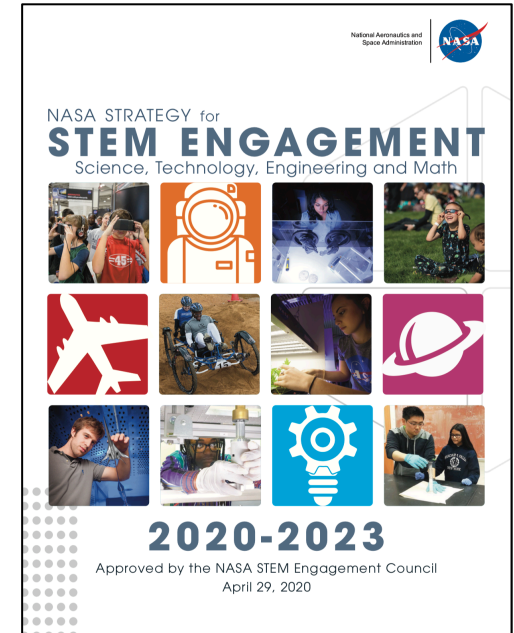


Graduate

STEM engagement is comprised of a broad and diverse set of programs, projects, activities and products developed and implemented by HQ functional Offices, Mission Directorates and Centers.

Available here:

<https://www.nasa.gov/sites/default/files/atoms/files/nasa-strategy-for-stem-2020-23-508.pdf>



NASA Strategy for STEM Engagement 2020-23



1

STRATEGIC GOAL 1: Create **unique opportunities** for a diverse set of students to contribute to NASA's work in exploration and discovery.

OBJECTIVES:

- 1.1 Provide student work experiences that enable students to contribute to NASA's missions and programs, embedded with NASA's STEM practitioners.
- 1.2 Create structured and widely accessible experiential learning opportunities for students to engage with NASA's experts and help solve problems that are critical to NASA's mission.



2

STRATEGIC GOAL 2: Build a **diverse future STEM workforce** by engaging students in authentic learning **experiences** with NASA's people, content and facilities.

OBJECTIVES:

- 2.1 Develop and deploy a continuum of STEM experiences through authentic learning and research opportunities with NASA's people and work to cultivate student interest, including students from unrepresented and underserved communities, in pursuing STEM careers and foster interest in aerospace fields.
- 2.2 Design the portfolio of NASA STEM engagement opportunities to contribute toward meeting Agency workforce requirements and serving the nation's aerospace and relevant STEM needs.



3

STRATEGIC GOAL 3: **Attract diverse groups of students to STEM** through learning opportunities that **spark interest** and **provide connections** to NASA's mission and work.

OBJECTIVES:

- 3.1 Attract a broad and diverse set of students to STEM through targeted opportunities and readily available NASA STEM engagement resources and content.
- 3.2 Foster student exposure to STEM careers through direct and virtual experiences with NASA's people and work.

What's New:

- New Strategic Goal 3 focused on **attracting** students to STEM
- Increased emphasis on **diversity and inclusion** with focus on increasing and broadening participation
- Clear **target beneficiary strategies** aligned to achieve strategic objectives.
- Cross-cutting strategies to drive **scalability and accessibility** and to capitalize on NASA's STEM workers as role models.
- Additional Design Principle focused on **outcomes and metrics**.

FY2021/2022 STEM Engagement Priorities



Priority 1: Higher Ed: Focus on increasing diversity and broadening participation in higher education challenges and competitions.

- Alignment to the NASA Strategy for STEM Engagement:
 - Strategies We Will Employ: Higher Education 2. Create challenges, competitions and other transdisciplinary experiential learning opportunities to enhance STEM student studies



Priority 2: Pre-College: Focus on attracting diverse groups of pre-college students to NASA STEM, with a strategic approach toward a continuum of NASA STEM experiences.

- Alignment to the NASA Strategy for STEM Engagement:
 - Strategic Goal 3: Attract diverse groups of students to STEM through learning opportunities that spark interest and provide connections to NASA's mission and work.
 - Objective 3.1 Develop and deploy targeted opportunities and readily available NASA STEM engagement resources and content, to attract students to STEM.



Priority 3: Agency STEM Engagement: Focus on STEM Engagement strategies for agency Level One mission milestones.

Space Grant Overview



Public Law 100-147 directed NASA to establish the National Space Grant College and Fellowship Program.

- Space Grant is a competitive grant opportunity that enables the active involvement of 52 Consortia in 50 States, the District of Columbia, and the Commonwealth of Puerto Rico. Cooperative agreements with each consortium align their work with the Nation's STEM education priorities and the annual performance goals of the Agency.
- Space Grant supports and enhances science and engineering education, and research efforts for educators and learners by leveraging the resource capabilities and technologies of over 1,000 affiliates from universities, colleges, industry, museums, science centers, and State and local agencies.
- Space Grant utilizes key NASA resources to provide students access to research and hands-on STEM experiences. Some of these activities include: high-altitude balloons, sounding rockets, aircraft, and space satellites.
- The goal of the project is to contribute to the nation's aerospace enterprise by funding education, research, and informal education projects through a national network of university-based Space Grant consortia.

Space Grant's Purpose



The goal of the Space Grant Program is to contribute to the NASA mission, specifically in the area of government and industry partnerships “to improve America’s aerospace technologies and advance American leadership” by funding education, research, and informal education projects through a national network of university-based Space Grant consortia. Space Grant consortia are expected to develop innovative and integrated plans to advance aerospace knowledge and expand related activities. The specific objectives of the Space Grant Program are to:

- Promote a strong STEM education base from elementary through secondary levels while preparing teachers in these grade levels to become more effective at improving student academic outcomes;
- Contribute to the technological progress of NASA’s Mission Directorates;
- Establish and maintain a national network of universities with interests and capabilities in aeronautics, space, and related fields;
- Encourage cooperative programs among universities, aerospace industry, and Federal, state, and local governments;
- Encourage interdisciplinary training, research, and public service programs related to aerospace; and
- Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology.



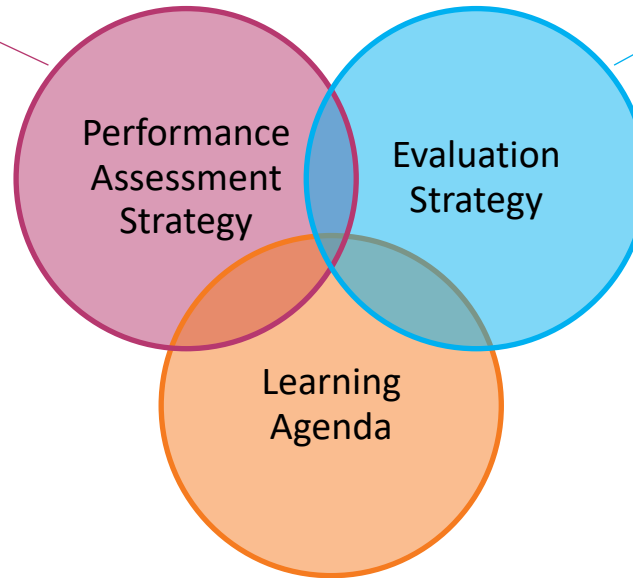
OSTEM Performance and Evaluation Overview

NASA STEM Engagement



Performance Assessment Strategy, Evaluation Strategy, & Learning Agenda

Performance Measurement is the ongoing monitoring and reporting of program accomplishments, particularly progress towards established goals. It is typically conducted by program or agency management. Performance measures may address the type or level of program activities conducted (process), the direct products and services delivered by a program (outputs), or the results of those products and services (outcomes). A “program” may be any activity, project, function, or policy that has an identifiable purpose or set of objectives.¹



Program Evaluations are individual systematic studies conducted periodically or on an ad hoc basis to assess how well a program is working. They are often conducted by experts external to the program, either inside or outside the agency, as well as by program managers. A program evaluation typically examines achievement of program objectives in the context of other aspects of program performance or in the context in which it occurs.¹

A **learning agenda** is a systematic way to identify the data agencies intend to collect, use, or acquire, as well as the methods and analytical approaches to facilitate the use of evidence in policymaking. It promotes deliberate planning of evidence-building activities, including how to prioritize limited resources and address potential information gaps that may inhibit an agency's effective mitigation of risks identified through their enterprise risk management processes. Learning agendas relate to, but are distinct from research and development planning for the purposes of building the stock of knowledge. They clearly document how an agency intends to build and use evidence to support its proposed regulatory actions.²

1. U.S. Government Accountability Office (GAO). (2011). Performance measurement and evaluation: Definitions and relationships. GAO-11-646SP.
2. Vought, R. T. (2019, July 10). Memorandum for heads of executive departments and agencies. Executive Office of the President Office of Management and Budget.

Integrated, Comprehensive Performance Assessment & Evaluation Strategy



*NASA Evaluation Contractor, Paragon TEC, Inc. will be providing evaluation technical assistance to NASA Space Grant Project Management Team as a subject matter expert (SME) for the execution and performance monitoring of Space Grant Project-Level Evaluation and to pilot awardees.

Space Grant Program-Level Independent Evaluation Purpose



- The purpose of this independent program-level impact evaluation is to
 - determine how and to what extent the Space Grant Program is designed and executed in alignment with federal law and NASA's STEM engagement goals and priorities; and
 - assess the impact and degree to which the Space Grant Program is achieving its intended outputs and outcomes on a national level
- These efforts will provide Space Grant Program Management with robust evidence that can be used to drive future scaled evaluation strategy, program policy, data collection plans, and appropriated competitive awards
- It is essential that this evaluation be performed on a truly independent basis in order to ensure that the input and evidence the Space Grant Program receives under this funding opportunity is objective and unbiased



Awardee Overview Presentations



Evaluation Technical Assistance

NASA Evaluation Contractor, Paragon TEC, Inc.

Program-Level Independent Evaluation Reporting Requirement and Timeline



- **Final Space Grant Program-Level Pilot Evaluation Plan (*Submit a final comprehensive evaluation plan 30 days after award Kick-Off Meeting in accordance with NASA guidance provided at Kick-Off Meeting*)**
 - **Due November 30, 2020**
 - *Use Guidelines for Submittal of Evaluation Plans template*
 - *NASA will provide feedback on Evaluation Plan*

- **Month Progress Status Updates (*Submit and present updates in PowerPoint Slide Deck by the 15th of each month in accordance with NASA guidance provided at Kick-Off Meeting*)**
 - **Starting January 15, 2021**
 - *Use Monthly Progress Report PowerPoint template*

Evaluation Plan and Monthly Progress Report Template Overview



Table of Contents

Introduction	1
Description of the Project	1
Purpose of the Evaluation	2
Evaluation Design and Methodology	
Evaluation Questions	
Data Collection Strategy	
Evaluation Methods	
Timeline	
Evaluation Risk Mitigation Strategy	
References	
Appendix A: Copy of Instrument 1	
Appendix B: Copy of Instrument 2	
Appendix C: Evaluation Data Collection Summary Matrix	

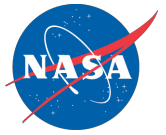
Description of Deliverable (p. 21 in solicitation)



• Monthly Progress Status Updates

- *(Submit and present PowerPoint Slide Deck by the 15th of each month in accordance with NASA guidance provided at kickoff meeting)*
- Update Space Grant Program Management and P&E Support on pilot evaluation progress including:
 - Evaluation planning;
 - IRB review and approval;
 - The timing and frequency of data collection development, execution and analysis;
 - Achievement/milestone highlights; and
 - Risks and mitigation strategies
 - Budget

Program-Level Independent Evaluation Reporting Requirement and Timeline (Cont.)



- **Interim Evaluation Report (Submit 90 days prior to Year 1 Anniversary Date)**
 - **Due July 9, 2021**
 - **Use Evaluation Report template*
 - *Includes preliminary Year 1 evaluation findings, recommendations, lessons learned, proposed draft Space Grant Program Logic Model, and enhancements to evaluation plan for execution in Year 2*

- **Final Evaluation Report (Submit 90 days prior to Year 2 Anniversary Date)**
 - **Starting January 15, 2021**
 - **Use Evaluation Report template*
 - *Includes final evaluation findings and recommendations, final Space Grant Program Logic Model, and a proposed evaluation plan for scaled Space Grant Program-Level Evaluation for execution in Years 3-4*

* NASA will develop and provide an approved template for the Interim Evaluation Report and the Final Evaluation Report



Table of Contents:

Evaluation Plan Outline (Sample) and Components	2
Developing Evaluation Questions	3
Logic Model Development	4
Logic Model Worksheet	5
Evaluation Resources	6
Developing an Effective Evaluation Report	7
Institutional Review Board (IRB) Information	9



At a minimum, proposals shall be quasi-experimental in nature and comply with professional standards of evaluation practice and common guidelines for education research and development, including but not limited to the following:

- **“Common Guidelines for Education Research and Development”**
<http://ies.ed.gov/pdf/CommonGuidelines.pdf>
- **“Designing Evaluations”**
<http://www.gao.gov/products/GAO-12-208G>
- **“Effective Practices for Evaluation STEM Out-of-School Time Programs”**
<http://files.eric.ed.gov/fulltext/EJ1021960.pdf>
- **“Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User-Friendly Guide”**
<http://www2.ed.gov/rschstat/research/pubs/rigorousetid/rigorousetid.pdf>
- **“User-Friendly Handbook for Project Evaluation”**
http://www.evaluate.org/wp-content/uploads/formidable/Doc_2010_NSFHandbook.pdf

Contact Information

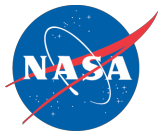


Rick Gilmore, Performance and Evaluation Program Manager,
NASA Headquarters

Email: richard.l.gilmore@nasa.gov

Vince Schiavone, Lead Evaluation Specialist, Paragon TEC, Inc.

Email: vincent.j.schiavone@nasa.gov



Q: It used to be that Space Grant also had a mission of Research Infrastructure Development. I don't see that on your page 8 slide. Is this no longer a mission of Space Grant?

A: The specific goal of Research Infrastructure was subsumed by Contribute to the technological progress of NASA's Mission Directorates. This change was made in the FY2020-2024 base award.



Q: Slide 19 about the reports; do those report due dates impact the end of year dates for our timelines and for the budget? E.g., is the year one end date Oct 31, 2021?

A: The reporting deadlines do not necessarily impact the budget. Both awardees will have the entire 2-year period of performance to spend down funds. During July 2022, your final reports are due for down-selection of an award that will receive a funded extension. The other awardee will have until September 30, 2022 to spend all remaining award funding.



Q: When will we get the template for the Nov 30 report?

A: All materials will be posted on Inside Space Grant. A link will be sent out to the awardees once the materials are available.