NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
NASA Headquarters
Office of Education

2017 Competitive Program for Science Museums, Planetariums and NASA Visitor Centers (CP4SMPVC)

NASA RESEARCH ANNOUNCEMENT (NRA)
Type of Project: STEM Education and Accountability Projects (SEAP)

ANNOUNCEMENT NUMBER: NNH17ZHA002N

CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA) NUMBER: 43.008

ANNOUNCEMENT TYPE:
Initial Announcement

ISSUED: March 31, 2017

PRE-PROPOSAL TELECON (optional): April 6, 2017

NOTICES OF INTENT DUE (strongly encouraged): April 19, 2017

PROPOSALS DUE: TO BE DETERMINED (TBD)
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EXECUTIVE SUMMARY

This National Aeronautics and Space Administration (NASA) Research Announcement (NRA), entitled 2017 Competitive Program for Science Museums, Planetariums and NASA Visitor Centers (CP4SMPVC), solicits proposals led by Informal Education Institutions (IEIs) for informal education opportunities in support of NASA’s Office of Education (OE) under the STEM Education and Accountability Project (SEAP), in cooperation with NASA Headquarters’ Offices of Communications, Chief Scientist, and Chief Technologist, the Mission Directorates, and Mission Support Directorate. NASA may elect to support some of the proposals submitted under this NRA through the use of non-SEAP funds if such funds are available from other NASA or federal sources.

NASA established STEM Education and Accountability Project in 2014 to help meet the goals of the NASA Strategic Plan and federal education priorities. SEAP is the result of NASA’s continuing efforts to streamline and competitively consolidate its STEM education activities, consistent with Congressional and Administration direction. Working in collaboration with other Federal agencies, NASA supports evidence-based, effective, NASA-unique activities that includes Institutional Engagement (IE). IE increases STEM capabilities at formal and informal educational institutions and organizations by incorporating content based on NASA’s missions.

Proposals are solicited in this NRA to uniquely perform NASA education or research engagement and/or exhibits through partnerships with K-12 schools, youth-serving organizations, libraries, higher education institutions, and/or other agencies that support federal STEM education goals through inquiry- or experiential-based activities that feature NASA’s missions, science, engineering, exploration, or technologies. This solicitation further seeks projects that feature NASA-themed content in space exploration, aeronautics, space science, Earth science, or microgravity, or a combination of these topics to support federal and NASA education outcomes.

Subject to Congressional appropriation of sufficient funds in Fiscal Years 2017-2018, and also pending NASA’s receipt of proposals of adequate merit, NASA expects to select between one (1) and twenty (20) proposals for award. NASA reserves the right to make a full or partial selection of any proposal. Successful proposals typically will be funded as grants or cooperative agreements depending on the size and complexity of the proposed project. An individual award will not exceed $1,000,000.

For proposals of Type (2) Pilot Projects, the lowest amount that may be proposed is $300,000, with a period of performance not to exceed two years. For projects classified as Type (1) Project Development and Implementation, or Type (3) Combination, the lowest amount that may be proposed is $500,000, with a period of performance not to exceed three years.
## SUMMARY OF KEY INFORMATION

<table>
<thead>
<tr>
<th><strong>Number of new awards pending adequate proposals of merit</strong></th>
<th>1 to 20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration of awards</strong></td>
<td>One to three years</td>
</tr>
<tr>
<td><strong>Award Type</strong></td>
<td>Grant or Cooperative Agreement</td>
</tr>
<tr>
<td><strong>Eligibility</strong></td>
<td>See Section 3 of this NRA</td>
</tr>
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<td><strong>Principal Investigator Requirement</strong></td>
<td>See Section 3.3 of this NRA</td>
</tr>
<tr>
<td><strong>Technical Content Limitation</strong></td>
<td>NASA-themed space exploration, aeronautics, space science, Earth science, or microgravity, or combinations of these themes. See Section 1.3.1.1.</td>
</tr>
</tbody>
</table>
| **Pre-proposal Telecon (Optional)** | April 6, 2017 2:00 – 4:00 PM Eastern Time  
To join: 888-323-4924 passcode 9687882 |
| **Due date for Notice of Intent to propose (NOI)** | April 19, 2017 (DATE SUBJECT TO CHANGE); 11:59 PM Eastern Time |
| **Due date for proposals** | June 14, 2017 (DATE SUBJECT TO CHANGE); 11:59 PM Eastern Time |
| **Page limit for the central Scientific-Educational-Management section of proposal** | 15 pp; see the *NASA Guidebook for Proposers* |
| **Detailed instructions for the preparation and submission of proposals** | See the *NASA Guidebook for Proposers* at [https://www.hq.nasa.gov/office/procurement/nraguidebook/](https://www.hq.nasa.gov/office/procurement/nraguidebook/)* |
| **Submission medium** | Electronic proposal submission is required via NSPIRES or grants.gov; no hard copy will be accepted. See the *NASA Guidebook for Proposers*. |
| **Web site for submission of proposal via NSPIRES** | [http://nspires.nasaprs.com/](http://nspires.nasaprs.com/) (help desk available at nspires-help@nasaprs.com or (202) 479-9376 from 8:00 am to 6:00 pm Eastern Time, excluding federal holidays). |
| **Web site for submission of proposal via grants.gov** | [http://grants.gov/](http://grants.gov/) (Contact Center is available by email at support@grants.gov, or by calling 1-800-518-4726 and via website at [https://grants-portal.psc.gov/](https://grants-portal.psc.gov/).) |
| **Selection Official** | Tammy Rowan  
STEM Education and Accountability Project Manager  
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Washington, DC 20546 |
| **Technical Officer** | Beverly Girten  
NASA Office of Education Institutional Engagement Director  
NASA Headquarters  
Washington, DC 20546 |
| **NASA point of contact concerning this project** | Leslie L. Lowes  
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California Institute of Technology  
Pasadena, CA  
CP4SMP@jpl.nasa.gov |
1. FUNDING OPPORTUNITY DESCRIPTION

1.1 Background

The Competitive Program for Science Museums, Planetariums, and NASA Visitor Centers (CP4SMPVC) is authorized by P.L. (Public Law) 109-155 SEC. 616. MUSEUMS:

The Administrator may provide grants to, and enter into cooperative agreements with, museums and planetariums to enable them to enhance programs related to space exploration, aeronautics, space science, earth science, or microgravity.


To the extent possible, NASA is urged to use education funds to address the educational needs of women, minorities, and other historically underrepresented groups.

Guidance of the CP4SMPVC program follows language from Senate and House Reports for the 2016 Appropriations Bill. Senate Report 114-66 provides the CP4SMPVC grant program to create interactive exhibits, professional development activities, and community-based programs to engage students, teachers, and the public in STEM. House Report 114-130 notes NASA’s work in partnership with youth service organizations to engage K-12 students in STEM-related activities and to help encourage those students to pursue future STEM-related, and directs NASA to continue its K-12 STEM education efforts with youth service organizations.

The American Innovation and Competitiveness Act (PL 114-329) directs the National Science Foundation (NSF), the Department of Education, the National Oceanic and Atmospheric Administration (NOAA), and NASA to establish a STEM Education Advisory Panel to advise the NSTC Committee on STEM Education on matters related to science, technology, engineering, and mathematics. It further allows the use of funds to foster on-going partnerships between institutions involved in informal STEM learning, institutions of higher education, and education research centers. (Ref: https://www.congress.gov/bill/114th-congress/senate-bill/3084)

The mandate of the CP4SMPVC program aligns with the strategic directions to improve STEM instruction, to increase and sustain youth and public engagement in STEM, and to better serve groups historically under-represented in STEM fields.

1.2 NASA Strategic Plan and Relevance to Education

The NASA 2014 Strategic Plan includes the focus on the development of STEM disciplines along with the engagement of informal education institutions in accomplishing the vision and mission of NASA. NASA contributes to national efforts for achieving excellence in STEM education through a comprehensive education portfolio implemented by the Office of Education, the Mission Directorates, and the NASA Centers. NASA will continue the Agency’s tradition of investing in the Nation’s education programs and supporting the country’s educators who play a key role in preparing, inspiring, exciting, encouraging, and nurturing the young minds of today who will manage and lead the Nation’s laboratories and research centers of tomorrow.

NASA Strategic Goal and Objective relevant to education are outlined by the 2014 NASA Strategic Plan https://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf:
Strategic Goal 2: Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.

Objective 2.4: Advance the Nation’s STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers and faculty in NASA’s mission and unique assets.

NASA’s Education strategy is to engage in strategic partnerships with intergovernmental, academic, industrial, entrepreneurial, and international communities to ensure NASA’s education mission and vision reach a wider and diversified audience. NASA seeks to facilitate partnerships that support the evolution of its portfolio of projects and strategic objective. NASA defines specific benefits and outcomes for each partnership, systematically managing the lifecycle of partnerships and leveraging each organization’s resources appropriately.

NASA Education’s FY 2015 - 2017 NASA Education Implementation Plan guides the planning, implementation, and assessment of the NASA Education portfolio and provided a coordinated tool to describe the philosophy and operating principles for NASA education.


NASA’s Office of Education focuses on national STEM areas of need—educator professional development, institutional engagement, STEM engagement for all learners, and NASA internship, fellowship, and scholarship opportunities—and ensures that NASA’s education investments are unique and non-duplicative. NASA’s approach to STEM education implements the principles of transparency, participation, and collaboration throughout all of its education activities.

CP4SMPVc supports the following NASA Education Multi-year Performance Goals:

- **FY 2017 and FY 2018 2.4.2**: Continue to support STEM educators through the delivery of NASA education content and engagement in educator professional development opportunities.

- **FY 2017 and FY 2018 2.4.4**: Continue to provide opportunities for learners to engage in STEM education through NASA unique content provided to informal education institutions designed to inspire and educate the public.

- **FY 2017 and FY 2018 2.4.5**: Continue to provide opportunities for learners to engage in STEM education engagement activities that capitalize on NASA unique assets and content.

Annual Performance Indicators:

- ED-17-2: Engage with at least 10,000 educators in NASA-supported professional development, research, and internships that use NASA-unique STEM content.

- ED-17-4: Maintain the NASA Museum Alliance and/or other STEM education strategic partnerships in no fewer than 40 states, U.S. Territories and/or the District of Columbia.

- ED-17-5: Engage with at least 50,000 elementary and secondary students in NASA STEM engagement activities.
1.3 Overview of Opportunity

1.3.1. CP4SMPVC Goals and Objectives

NASA’s Office of Education, in cooperation with NASA Headquarters’ Offices of Communications, Chief Scientist, and Chief Technologist, the Mission Directorates, and Mission Support Directorate, solicits proposals led by Informal Education Institutions (IEIs) to uniquely perform NASA education or research engagement and/or exhibits through partnerships with K-12 schools, youth-serving organizations, libraries, higher education institutions, and/or other agencies that support Federal STEM education goals through inquiry- or experiential-based activities that feature NASA’s missions, science, engineering, exploration, or technologies. This solicitation further seeks projects that feature NASA-themed content in space exploration, aeronautics, space science, Earth science, or microgravity, or a combination of these topics (Appendix A) to support federal and NASA education outcomes.

CP4SMPVC seeks to provide authentic STEM engagement and/or professional development opportunities for informal and formal educators that:

- Leverage NASA assets and NASA-related content to provide experiential authentic STEM opportunities that encourage innovation, critical thinking, and problem solving skills;
- Utilize partnerships to improve reach and better serve groups historically underrepresented in STEM fields;
- Support the learner experience through appropriate connections to state and local needs, STEM learning systems and coordinated interconnected experiences, and effective engagement across classrooms and out-of-school settings;
- Use or develop evidenced-based educational strategies in designing and implementing the project; and
- Provide a measureable impact on learner interest in and positive attitudes towards STEM topics and improve self-perception of the learner’s ability to participate in STEM.

For this solicitation, informal education projects shall focus on STEM engagement and advancement of STEM literacy for youth (particularly those in grades 4-12), families, and informal and formal educators serving those audiences.

Projects are encouraged to include partnerships and coordinated inter-connected authentic STEM engagement and learning experiences (see Appendix B Authentic STEM Experience Framework), and include an emphasis on collaboration with stakeholder organizations and communities traditionally underserved in STEM, particularly rural areas, and women and girls.

Proposed projects shall be one of the following types:

1. Project Development and Implementation, utilizing evidence-based approaches (i.e. backed by research evidence that proves its effectiveness);
2. Pilot Project, that also budgets for a needs assessment, conference gathering or symposia, or other type of study to understand the effectiveness of an approach; or
3. Combination of types (1) and (2).
Pilot Projects allow practitioners to undertake exploratory development work that has the potential to lead to innovative, field-advancing development and implementation level projects. This type of project shall identify needs and provide evidence, findings, and/or deliverables that form the basis of anticipated further innovative work including new evidence-based strategies for informal education projects.

A conference gathering or symposia, if proposed, should be a Pilot Project. It shall be well-focused, relate to the goals of the CP4SMPVC NRA, and generate product(s) usable by the broader informal education community of practitioners and/or researchers. Conference gatherings or symposia projects shall promote collaboration and partnerships among NASA-related STEM engagement efforts (and potentially those of other governmental agencies), and promote professional competency and broaden community knowledge of lessons-learned and resources in STEM engagement efforts.

**Examples of Eligible Projects (including but not limited to)**

Exhibits (permanent, traveling, or virtual); multi-audience or generational STEM programming for educators, students, youth, parents, and the general public; STEM mentoring or professional development for informal education providers (e.g., youth groups, out-of-school-time programs, youth group leaders, library staff, workshop or activity leaders, curriculum developers, docent managers, exhibit designers, library professionals, community leaders, etc.) or formal educators; data visualization technologies such as planetariums or global display systems for STEM programming; informal learning research or data collection or data analysis oriented activities, such as citizen-science projects; investigations or application of science, technology, engineering, arts, and math (STEAM); performing or other creative arts; or other activities that are culturally-relevant to and focused on targeted populations, such as women, ethnic minorities, rural populations, and persons with disabilities. Projects that integrate NASA STEM content into the arts are welcome, but may not be a priority for selection.


**1.3.1.1. NASA Relevance**

A key feature that distinguishes this NRA from informal, STEM engagement, educator professional development or education sponsored by other Federal agencies is that in addition to meeting criteria for technical merit and affordable and realistic costs, proposals shall align to NASA’s Mission Directorate programs and/or Office of Education.

The only eligible technical subject areas are NASA-themed space exploration, aeronautics, space science, Earth science, or microgravity, or combinations of these themes. Proposals focused exclusively on non-NASA themes will be disqualified from award consideration.

NASA’s Mission Directorates and other offices cooperating with this NRA have identified content priorities aligned to the NASA Strategic Plan (see Appendix A of this document) and identified scientific and educational priorities. Proposals shall explicitly address one or more of the priorities noted in Appendix A, Technical and Education Content Descriptions.
1.3.1.2. Integration with NASA and Other NASA Education and/or Mission Activities

Projects are strongly encouraged to use NASA assets including, but not limited to, scientific data, visualizations, personnel, educational materials, and NASA owned patents and/or computer software. If the development of a new asset related to NASA content is proposed, the proposer shall explain why an existing asset cannot be used instead. To facilitate the use of NASA’s assets, projects are strongly encouraged to propose partnerships with relevant NASA entities (directories, offices, centers, etc.) and/or NASA employees and support contractors. If a proposal intends to use NASA-owned patents and/or computer software, any such use of NASA technology requires a Patent License Agreement or Software Usage Agreement (SUA) granted from NASA.

Proposals are encouraged to support continuity of participant experience by including a plan to direct participants to other existing NASA educational opportunities and affiliates (for example the National Space Grant College and Fellowship Program (Space Grant), Experimental Program to Stimulate Competitive Research (EPSCoR), or other NASA-funded research at universities).

1.3.1.3. Partnerships and Reach to Underserved Groups

NASA is interested in proposed projects that expand STEM engagement and/or educator professional development in rural-underserved areas and/or bring more women and girls and other underserved individuals into the fields of aeronautics research, engineering, Earth and space sciences, and other relevant fields.

NASA seeks proposals that build upon existing NASA programs, projects, and/or assets through alliances and partnerships. Also of particular interest are partnerships with higher education institutions to address the needs of underserved populations. For example, NASA has several existing programs including:

- NASA Minority University Research and Education Project (which focuses on the educational needs of women, minorities, and other historically underrepresented groups)  
  [http://www.nasa.gov/offices/education/programs/national/murep/home/index.html](http://www.nasa.gov/offices/education/programs/national/murep/home/index.html)
- National Space Grant College and Fellowship Program  
  [http://www.nasa.gov/offices/education/programs/national/spacegrant/home/index.html](http://www.nasa.gov/offices/education/programs/national/spacegrant/home/index.html)

(For a list of institutions of higher education enrolling populations with significant percentages of undergraduate minority students, see [https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html](https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html).)

Note: Individuals from other Federal agencies may be involved in the review of proposals.

NASA also enters into Space Act Agreements (SAA) with commercial, educational, and non-profit organizations using NASA’s other transaction authority for mutually beneficial reasons, including inspiring and engaging youth to experience STEM topics, particularly those underrepresented in STEM fields. Proposals involving SAAs cannot duplicate existing SAAs. A searchable list of SAAs can be found at [https://www.nssc.nasa.gov/saa](https://www.nssc.nasa.gov/saa).

Partnership relationships are strongly encouraged in proposals to CP4SMPVC but are not mandatory. The decision of whether to include partners in a proposal resides solely with the lead institution.
1.3.1.4. Substantiated Needs; Interconnected Experiences

Proposals shall address substantiated (e.g., through an existing needs assessment or other evidence) national, regional or local educational needs or challenges and offer solutions with potential for significant impact. Local and regional project stakeholders bring expertise necessary to identify common areas of concern and to collaborate on strategies that leverage NASA and other Federal assets. Partnerships with K-12 schools and/or youth-serving organizations and/or higher education institutions to support inquiry-based education are highly encouraged.

Proposers are strongly encouraged to consider projects that use linkages to improve STEM education across the learning environments, for example, through effective engagement across classroom and out-of-school settings that can support student selection and persistence in STEM careers. Proposers are also strongly encouraged to demonstrate how the proposed work will be integrated into a larger existing or emerging STEM learning ecosystem that leverages the technical, educational, and learning resources in their community.

Where appropriate, projects shall align with the Practices, Crosscutting Concepts and Core Ideas of the Next Generation Science Standards: http://www.nextgenscience.org/next-generation-science-standards. Youth enrichment and career-oriented activities shall be developmentally appropriate, that is, suitable for the youths’ age and stage of learning development.

1.3.1.5. Evaluation and Dissemination Plans; Measureable Impact on Learner Interest

All projects shall conduct an independent evaluation in order to improve and assess the effectiveness of strategies used in the project. Evaluation plans shall include measurement of the project’s effectiveness in meeting the project goals and objectives as well as the NASA and federal strategic objectives.

Proposers are strongly encouraged to consider their project and evaluation impacts, outcomes, and metrics in terms of the evidence and categories of informal science education impacts as stated in the National Science Foundation report Framework for Evaluating Impacts of Informal Science Education Projects.

The impact of the proposed project on the target audiences shall be measurable during the award period, and preferably be measured over time throughout the life of the project. Proposals shall describe potential impacts of the project beyond the award period. During the award period, the lead institution is required to report both outputs and outcomes for the project.

Proposers shall include specific and sufficient resources dedicated to evaluation activities in their detailed work plan, project budget, and schedule of completion. A minimum of 8% of the total project budget is required to support evaluation activities. Project evaluation shall be handled by independent evaluator who may be a third-party or, if a current employee of the applicant organization, shall be truly independent from the policy, operations, and management functions of the proposed project, i.e. reporting responsibility independent of the proposed project.

Proposers shall describe how the products generated during the project and the evaluation results will be shared with other individuals and organizations, including the NSF’s informalscience.org. Other dissemination suggestions can be found in the Principal Investigator’s Guide: Managing Evaluation in Informal STEM Education Projects (pages 57-66). Project key personnel and/or
participants are strongly encouraged to write and submit journal and proceedings articles and to participate in NASA-sponsored and other professional conferences.

Appendix C includes a non-exhaustive list of recent literature pertaining to evaluation of informal science education projects.

1.3.1.6. Evidenced-Based Educational Strategies

Projects shall use evidence-based strategies that rely on verifiable data and information that has been gathered using the standards of professional research and evaluation organizations. Projects classified as Type (1) Project Development and Implementation, or Type (3) Combination shall use evidenced-based educational strategies in designing and implementing the project, and clearly state the source of the evidence. Type (2) Pilot Projects and Type (3) Combination shall provide evidence, findings, and/or deliverables that form the basis of anticipated further innovative work including evidence-based strategies. If the project is Type (3), proposers shall clearly articulate the distinction between the Pilot portion of the project and the Project Development and Implementation portion.

1.4 Guidebook for Proposers

All policies and procedures for the preparation and submission of proposals, as well as those for NASA’s review and selection of proposals for funding, are presented in a separate document entitled *Guidebook for Proposers Responding to a NASA Funding Announcement (NFA)* (the *Guidebook for Proposers*) that is located at https://www.hq.nasa.gov/office/procurement/nraguidebook/. The *Guidebook for Proposers* is hereby incorporated into this NRA by reference, and proposers are responsible for understanding and complying with its procedures before preparing and submitting their proposals. **Proposals that do not conform to the standards in the Guidebook for Proposers may be declared noncompliant and rejected without peer review.** The chapters and appendices in the *Guidebook for Proposers* provide supplemental information about the entire NRA process, including NASA policies for the solicitation of proposals; guidelines for writing complete and effective proposals; NASA policies and procedures for the review and selection of proposals; as well as for issuing and managing the awards to the institutions that submitted selected proposals. Note that NASA’s policy for proposals involving non-U.S. participants is provided in the *Guidebook for Proposers*.

1.5 NASA’s Safety Policy

All proposals shall take into consideration NASA’s priority emphasis on safety.

Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA’s safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including employees working under NASA award instruments), and (4) high-value equipment and property.

Proposers should have a written safety policy. CP4SMPVC awardees shall notify the NASA Shared Services Center (NSSC) of any mishaps and close calls related to award implementation within 10 business days of the occurrence of the close call or mishap. The following NASA Procedural Requirement (NPR) applies to NASA entities and may be useful to non-NASA entities for benchmarking purposes:
NPR 8621.1C: NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping

Responsible Office: Office of Safety and Mission Assurance

http://nodies3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=8621&s=1C

For additional information on the NASA Safety and Mission Assurance Program see: http://sma.nasa.gov

2. AWARD INFORMATION

2.1 Award Type and Availability of Funds for Awards

The choice of award instruments that NASA uses under this NRA primarily includes grants or cooperative agreements between a lead NASA Center\(^1\) and the successful applicant. NASA will determine the appropriate award instrument for the selections resulting from this solicitation. Grants and cooperative agreements will be subject to the provisions of 2 CFR 1800, the NASA Grant and Cooperative Agreement Manual (GCAM), and the Guidebook for Proposers (all found at https://answers.nssc.nasa.gov/app/answers/detail/a_id/6487/~/nasa-grants-regulations-handbooks-service-delivery-guides) In the case of any conflict between the content of this NRA and the Guidebook for Proposers, this NRA takes precedence. Prospective proposers to this NRA are advised that in general, funds are not available to award all solicited activities at the time of this NRA release. The Government’s obligation to make awards is contingent upon the availability of sufficient appropriated funds from which payment can be made and the receipt of proposals that NASA determines are acceptable for award under this NRA. Subject to Congressional appropriation of sufficient funds in Fiscal Years 2017-2018, and also pending NASA’s receipt of proposals of adequate merit, NASA expects to select between one (1) and twenty (20) proposals for award. NASA reserves the right to make a full or partial selection of any proposal. Individual total award values will not exceed a maximum of $1,000,000.

For proposals of Type (2) Pilot Projects, the lowest amount that may be proposed is $300,000, with a period of performance not to exceed two years. For projects classified as Type (1) Project Development and Implementation, or Type (3) Combination, the lowest amount that may be proposed is $500,000, with a period of performance not to exceed three years.

Note: The accountability, reporting, and evaluation requirements for CP4SMPVC make it unlikely that a viable project could be accomplished for less than $300,000 for Type (2) Pilot Projects, or $500,000 for Type (1) Project Development and Implementation or Type (3) Combination. Proposals budgeted for less than these amounts are unlikely to advance to external peer review.

Prospective proposers are advised that at the time this NRA is released, funds beyond FY 2017 are generally not available for awards for all of the solicited program elements. NASA may elect

\(^1\) In cases where the proposer’s project supports a Mission Directorate, but is not directly related to work being carried out at any NASA Center, NASA Headquarters may serve as the Lead NASA Center.
to support some of the proposals submitted under this NRA through the use of non-STEM Education and Accountability Project (SEAP) funds if these funds are available from other NASA programs or federal sources.

2.2 Award Period of Performance

Project start dates are like proposed budgets in that they are subject to NASA procurement policies and negotiations. A proposed project’s start date is not the same as its award date. The period of performance for any CP4SMPVC award shall not exceed two years for projects classified as Type (2) Pilot Projects, and shall not exceed three years for projects classified as Type (1) Project Development and Implementation, or Type (3) Combination.

Any proposed period of performance shall be justified in the proposal. The appropriateness of the proposed period of performance will be evaluated by peer review. Also, NASA may select proposals for shorter award durations than proposed.

2.3Cancellation of NASA Research Announcement (NRA)

NASA reserves the right not to make any awards under this NRA and/or to cancel this NRA at any time prior to award. NASA assumes no liability (including reimbursement of proposal costs) for canceling the NRA or for any entity’s failure to receive an actual notice of cancellation. Cancellation notices will be communicated via NSPIRES.

2.4 Schedule for Awards

Every effort will be made to announce selections within nine (9) months from the proposal submission deadline. Selection notifications will be communicated electronically via NSPIRES to the institution’s Authorized Organization Representative (AOR) and Principal Investigator (PI). NSPIRES sends a decision notice via email requesting the PI or AOR to log into NSPIRES. This decision notice email means that NSPIRES has been updated to indicate the status of a proposal in NASA’s selection review process. When a PI or AOR logs into NSPIRES the following are examples of the type of decisions possible:

- A “declined” status means that: 1) NASA’s review of the proposal is concluded; and 2) no NASA funds are available to support the proposed project.

- A “selected” or “selectable (pending)” status means that the proposal’s review continues and the proposal has NOT received an award. A “selected” or “selectable (pending)” proposal status in NSPIRES is NOT a promise that a proposal has or will receive an award by the NSSC nor that any funds have been or will be transferred from NASA Headquarters to a NASA Field Center.

Proposers are cautioned that only a NASA Grant Officer working at the NASA Shared Services Center (NSSC) may make commitments, obligations or awards on behalf of NASA or authorize the expenditure of funds. No commitment on the part of NASA should be inferred from technical or budgetary discussions with anyone other than a NASA Grant Officer. A PI or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by a NASA Grant Officer does so at their own risk. Please refer to the NASA Guidebook for Proposers for more information.

After NASA makes initial selections, NASA may make a supplemental or partial selection of a proposal in response to this NRA that was not previously selected due to limited available funding. Possible reasons for a supplemental selection may be that additional funding becomes
available from another NASA program, a future fiscal year, or another federal source. The Selecting Official shall affirmatively make the additional selection and determine that the proposal was and remains meritorious under the current NRA selection criteria. The proposer will be contacted in writing and asked if they are still interested in being considered for an award. If the answer is yes, NASA will request a revised proposal (within the proposed cost) due to the passage of time or any other circumstances.

NASA has historically issued a NRA for new proposals every other year rather than annually. This alternating-year approach is based on the intrinsic merit and relevance to NASA of the proposals received and the costs to both NASA and the public to respond to CP4SMPVC. Issuing this NRA in alternating years began in FY 2010 when NASA did not issue a new NRA but instead selected additional recipients from FY 2009 proposals. In FY 2018, if sufficient funds are available, NASA may:

1) select additional 2017 proposals for funding rather than open a new competition; and/or
2) augment FY 2017 awards that were previously funded only in part due to insufficient availability of funds in FY 2017.

2.5 Successor Proposals and Resubmissions

If an organization submitted a proposal and it was funded under previous CP4SMP NRAs, this does not disqualify an organization from proposing as a lead institution, as a partner on a proposal, or as both under this new NRA.

Proposals that were submitted but not selected for any previous NASA solicitation may be submitted either in a revised or original form. Such proposals will undergo full peer review, along with any new proposals that NASA receives, and will not be advantaged nor disadvantaged in the evaluation process because they were previously submitted.

2.6 Proposal Funding Restrictions

In addition to the funding restrictions and requirements contained in the Guidebook for Proposers, 2 CFR 1800, and the GCAM, the following restrictions are applicable to this CP4SMPVC NRA. (See also Appendix N, Special Advisory on NASA Grant Budgets and Policy.)

- The IEIs may use NASA funds for support of regular and consultant staffing; for exhibit design, fabrication, installation, and evaluation; for education, evaluation, or policy research; and for STEM education programming serving students, the general public, and formal and informal education providers. NASA funds may be used for education, evaluation, or related equipment, travel, and materials. Basic facilities support, such as leasing of space or acquisition of capital assets (e.g., vehicles) that are not related to STEM education, is not allowable.

- Grants and cooperative agreements shall not be used as legal instruments for facility design or construction services to NASA. NASA grants and cooperative agreements are typically not used to fund, in full or in part, real property or general remodeling, construction, or demolition of new or existing non-NASA building or any other type of facility – including exterior spaces. This limitation does not prevent eligible recipients (such as research and/or education organizations, non-profit museums and /or

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2 Subject to some limitations; see below.
planetariums, parks, etc.) from using funds from a NASA grant or cooperative agreement to acquire equipment production or to enhance, establish, and/or replace permanent NASA-related exhibits with a total cost exceeding $5,000. This limitation also does not prevent recipients from using funds from grants or cooperative agreements for the design, fabrication (commonly called construction); delivery, and/or installation for a NASA-related-permanent exhibit; for installation and/or operation of fixed or permanent planetarium equipment; for outdoor exhibits such as solar system walks or Mars Rover yards; or for the delivery, installation, operation, and/or maintenance of permanent, large research equipment.

- **Budget Restrictions on Federal Partnerships (including NASA Centers).** If a proposer’s budget request includes funds for a federal partnership, and the project is selected, and subawards are appropriate, such funds will be deducted and separately provided by NASA to the federal partner. Subawards to federal entities may not be budgeted to use NASA funds beyond the first year of the award. Such subawards must be included in the proposal and include a detailed budget narrative and justification with detail for any civil servant/contractor salary or travel for work that is to be performed by civil servant/contractor workforce. Requests for funds for federal partners should be modest; i.e., not more than 25% of the total proposed project’s budget. Furthermore, the proposing institution may not request nor receive indirect costs on the amount budgeted for NASA Centers or other Federal entities. Proposers requesting NASA technical services or materials must contact the NASA Centers from which services or materials will be requested in order to ascertain the availability and anticipated costs of such services or materials.

- **Under this NRA, no more than fifty (50) percent of direct cost salaries shall be funded for key personnel, excluding K-12 and/or informal educators, post-doctoral researchers and students implementing or benefiting as project participants for the proposed effort. The reason for this limitation is to encourage sustainability of the programming.**

- **Indirect costs (e.g., facilities and administration) are included in the award amounts, with the remaining funds to be used in supporting project personnel (including partner’s personnel), travel, scholarships or support for exhibit design, fabrication, evaluation, and project-related subcontracts. Furthermore, the proposing institution shall not request nor receive indirect costs on the amount budgeted for other Federal entities. Indirect costs shall be explained to the extent that the explanation allows the Government to understand the basis of the estimates.**

- **The costs of evaluation, reporting, and sharing project results shall be included in the project budget. Examples of relevant costs associated with evaluation include payments for consultants or qualified project staff, development of effective instruments, information collection, and analysis of project data. The evaluation budget is a minimum of 8% of the overall project budget.**

- **Each award will be funded for no more than $1,000,000 in total.**

- Management fees are not allowed.

- **Cost sharing is permitted, but not required, for proposals submitted in response to this solicitation. NASA may accept cost sharing from any type of organization if it is voluntarily offered. See 2 CFR §200.306 (Cost Sharing or matching) and 2 CFR 1800.306.**
• All proposed costs, including matching or cost sharing, shall be allowable, allocable, and reasonable. Funds may only be used for the project. Unless otherwise directed in 2 CFR 200, for changes to the negotiated indirect cost rate that occur throughout the project period, you shall apply the rate negotiated for that year, whether higher or lower than at the time of the initial award. All activities charged under indirect costs shall be allowed under the cost principles in 2 CFR Part 200.

2.7 Intellectual Property Developed Under Awards

2.7.1 Data Rights

NASA encourages the widest practicable dissemination of research results at any time during the course of the investigation. The award will contain a Rights in Data clause that allows a Grant/Cooperative Agreement recipient to assert copyright in any work that is subject to copyright and was developed, or for which ownership was acquired, under the NASA award. NASA will reserve a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Government purposes, and to authorize others to do so, in any such copyrighted work. Note that the Grant Officer may revise the language under this Rights in Data clause to modify each party's rights based on the particular circumstances of the program and/or the recipient's need to protect specific proprietary information.

Awards are subject to the term and condition set forth at 2 CFR 1800.909 “Rights in Data.”

2.7.2 Patent Rights

Awards are subject to the term and condition set forth at 2 CFR 1800.908 “Patent Rights.” This term and condition requires compliance with the provisions of 37 CFR 401.3(a) which requires use of the standard clause set forth at 37 CFR 401.14 “Patent Rights (Small Business Firms and Nonprofit Organizations)”.

2.8 Diversity and Inclusion

NASA recognizes and supports the benefits of having diverse and inclusive scientific, engineering, and technology communities and fully expects that such values will be reflected in the composition of all panels and teams including peer review panels (science, engineering, and technology), proposal teams, science definition teams, and mission and instrument teams.

NASA’s Office of Diversity and Equal Opportunity (ODEO) advances equal opportunity among NASA grant recipients, such as science centers, museums, and planetariums; evaluates grant recipients’ equal opportunity (EO) compliance; and reports on promising practices through desk audits and onsite reviews. NASA ODEO has developed its MissionSTEM website (http://missionstem.nasa.gov) designed to assist NASA grant recipients with their civil rights compliance efforts. The Agency strives to provide a broad scope of technical assistance in this arena. Additionally, NASA has developed many policies, publications and informational materials to help administer EO laws. For complete and current information visit: http://odeo.hq.nasa.gov/policy.html.

NASA’s baseline civil rights requirements for award recipients are similar to other forms of Federal financial assistance. Among the most important of these requirements is an assurance by the grantee institution, prior to award, that it is in compliance with all Federal civil rights laws.
The Assurances provision in NASA’s regulations under Title VI of the Civil Rights Act of 1964 is an example of this requirement.

Receipt of Federal financial assistance (Federal Money, Federal Property and detail of Federal Personnel) by an entity triggers the authority and jurisdiction of civil rights laws and regulations for federally assisted programs. If a proposer is awarded a NASA grant/cooperative agreement, this triggers the obligation to comply with Title VI, Section 504 and the Age Discrimination Act is triggered. All programs, services and activities of the recipient’s organization shall comply with these laws and regulations, not just the program or exhibit that the NASA grant will support. If the recipient currently has a grant from another Federal agency, then the recipient is already required to comply with these laws.

Finally, in accordance with Federal statutes and NASA policy, no eligible applicant shall be excluded from participation in, denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NASA on the grounds of race, color, creed, age, sex, national origin, or disability.

3. ELIGIBILITY INFORMATION

3.1 Proposing Institutions

Organizations submitting a proposal under this NRA (other than those applying to Appendix R), are certifying that they meet the following criteria to propose as the lead or managing organization:

- legally recognized by a federal, state or local authority as a non-profit;
- located in the United States or its Territories; and
- provide STEM education programming, (such as but not limited to exhibits) through partnerships with K-12 schools or districts, youth-serving organizations, higher education, and/or other federal, state, or local agencies.

An eligible institution is not required to have the words museum, visitor center, science, planetarium, youth, or library in its legal name. All types of NASA Visitor Centers (e.g., private, state or federal entities) are eligible to propose (see Appendix D, Identification of Entities as NASA Visitor Centers Special Guidance: STEM Education Activities and NASA Visitor Centers).

Eligible institutions are established or chartered in order to enhance learning and/or engagement, including but not limited to: the study and display of STEM, or established to honor NASA history, personnel, and missions. The following are examples of the types of organizations eligible to compete under this NRA: air and space centers, aviation museums, children’s museums, natural history museums, observatories, planetariums, science-technology centers; aquariums, arboretums, aviaries, zoos; botanical gardens, nature centers, national, state and local parks; federal and non-federal NASA Visitor Centers and affiliates or Congressionally-authorized NASA memorials such as Challenger Centers based in the United States; theaters and auditoriums dedicated to astronomical shows; State, Local, or Federally-Recognized Tribal Government museums or planetariums; or associations of eligible institutions as recognized by the Internal Revenue Service.

Eligible non-profit IEIs also include, but are not limited to: amateur astronomy groups, community-based organizations, libraries, out-of-school-time organizations, youth-serving
organizations, scientific and or engineering societies, or associations that include both eligible institutions and ineligible institutions.

Proposers selected for funding may be required to self-certify that the organization qualifies or meets one or both of the following definitions:

1) Museum (including planetarium) as defined in Federal Management Regulation (FMR) 102-37-C-1 Amendment Appendix C—Glossary of Terms For Determining Eligibility Of Public Agencies And Nonprofit Organizations (http://www.gsa.gov/federalmanagementregulation):

“Museum” means a public or nonprofit institution that is organized on a permanent basis for essentially educational or aesthetic purposes and which, using a professional staff, owns or uses tangible objects, either animate or inanimate; cares for these objects; and exhibits them to the public on a regular basis (at least 1000 hours a year). As used in this part, the term “museum” includes, but is not limited to, the following institutions if they satisfy all other provisions of this definition: Aquariums and zoological parks; botanical gardens and arboretums; nature centers; museums relating to art, history (including historic buildings), natural history, science, and technology; and planetariums. For the purposes of this definition, an institution uses a professional staff if it employs at least one fulltime staff member or the equivalent, whether paid or unpaid, primarily engaged in the acquisition, care, or public exhibition of objects owned or used by the institution. This definition of “museum” does not include any institution that exhibits objects to the public if the display or use of the objects is only incidental to the primary function of the institution.

2) Youth-serving organization (YSO):

For the purposes of this NRA, youth is defined as children in grades 4-12. Additionally, a youth-serving organization (YSO) is defined as a non-profit institution that is organized to provide positive youth development activities on a permanent basis for educational, recreational, service-learning, or research purposes. Solicited organizations use a professional staff primarily engaged to meet the basic needs of youth for safety, caring relationships, and connections to the larger community while striving to build academic, vocational, personal, creative or social skills. For purposes of this definition, YSOs use at least one full-time staff member or the equivalent, whether paid or unpaid, primarily engaged in the recurring development, delivery or evaluation of the youth development; teaching youth new knowledge or allowing youth to practice life or technical skills etc.

YSOs can include national programs, public institutions such as recreational departments and local libraries, private organizations like churches and civic groups, and grass roots community efforts. YSOs can also include public or private K-12 schools, school districts, membership-limited organizations such as scouting or Boys and Girls Clubs, and community-based organizations that provide youth recurring opportunities to learn physical, intellectual, psychological, emotional, and social skills; exposure to intentional learning experiences; opportunities to learn cultural literacies, media literacy, communication skills, and good habits of mind; preparation for adult employment; and opportunities to develop social and cultural capital. An organization responding to this NRA is not required to have the term youth, child, boy or girl in its name. YSOs selected for funding may be required to self-certify that the organization is an entity dedicated to
addressing youth development and has an element promoting STEM awareness or authentic STEM research by youth, particularly youth under-represented or underserved in STEM careers, including girls and individuals with disabilities.

1) Library:

Eligible libraries are non-profit institutions that include the following:

- Public libraries;
- Public elementary and secondary school libraries;
- College (including community college) and university libraries;
- A library agency that is an official agency of a State or other unit of government and is charged by the law governing it with the extension and development of public library services within its jurisdiction;
- A library consortium that is a local, statewide, regional, interstate, or international cooperative association of library entities that provides for the systematic and effective coordination of the resources of eligible libraries, as defined above, and information centers that work to improve the services delivered to the clientele of these libraries;
- A library association that exists on a permanent basis; serves libraries or library professionals on a national, regional, state, or local level; and engages in activities designed to advance the well-being of libraries and the library profession.

An organization responding to this NRA is not required to have the term library in its name.

An IEI within a non-solicited organization, such as a college, university etc., may apply if it:

1) is able to independently fulfill all the eligibility requirements of this NRA;
2) functions as a discrete unit; i.e., has its own board of trustees or directors separate from the non-solicited entity’s board;
3) has its own fully segregated and itemized operating budget; and
4) has the authority to make the application on its own.

When any of the last four conditions are not met, an IEI may apply through its non-solicited organization only when the non-solicited organization provides a statement of commitment from its CEO or AOR that the NASA funds will be used and tracked exclusively for the proposed project and not for the non-solicited entity’s costs. Failure to include a statement of commitment will disqualify the proposal from award consideration. If the IEI has its own Data Universal Numbering System (DUNS) number, then a non-profit IEI within a non-solicited entity does not need to submit a letter of commitment.

The entities that are not eligible to submit a proposal include: other federal agencies; NASA Centers, Federally Funded Research and Development Centers (FFRDCs) including JPL, unaffiliated individuals, non-U.S. institutions, Education Organizations (Limited to Higher Education Institutions); Commercial or for-profit organizations. However, these entities may be proposed by an eligible IEI as sub-awardees or contractors.

All institutions receiving funds shall be listed on the proposal cover page.

Work to be performed through subcontracts/subawards shall be proposed in accordance with the Guidebook for Proposers.
Organizations that do not meet all CP4SMPVC eligibility criteria or whose proposals do not align with the thematic foci of this NRA should refer to Appendix R.

3.2 Number of Proposals

Organizations shall submit only one (1) proposal per Data Universal Numbering System (DUNS) number. If an organization submits more than one proposal using the same DUNS number, then none of its proposals will be evaluated. However, there is no limit on the number of times an entity may be proposed by another institution as an unfunded partner or as a sub-award. Eligible institutions may submit a proposal as a lead organization or be proposed for a sub-award as part of other organizations’ proposals, or both.

3.3 Principal Investigators and Proposal Team Members

A Principal Investigator (PI) shall be the President, Vice President, Chief Executive Officer, Chief Financial Officer, Chairman of the Board, Superintendent of Schools, Planetarium Director, Director of Sponsored Research, or similarly ranked executive from an eligible institution. PI status is a key indicator that the proposal has sufficient institutional engagement to be successfully implemented. For additional information for the detailed rationale and criteria for Principal Investigators, see Appendix E, Principal Investigator Criteria Details.

3.4 Cost Sharing or Matching

Cost sharing or matching is not required. However, this does not prohibit voluntary cost sharing. NASA may accept cost sharing from any type of organization if it is voluntarily offered. See 2 CFR §200.306 (Cost Sharing or matching) and 2 CFR 1800.306.

3.5 Interactions, Collaborations, and Partnerships with NASA

IEIs are encouraged (but not required) to build collaborations with one or more relevant NASA Center(s) or other NASA facilities (see Appendix A), and universities and other schools or educational institutions currently or previously funded by NASA programs such as Space Grant and MUREP, to enhance the ability of the project to deliver NASA-unique STEM content.

NASA Centers receive and respond to many requests for education and public outreach activities that require no special resource commitments because 1) they are part of the regular business practices which are already included in a Center’s budget or 2) such requests are handled on a case-by-case basis based on availability of personnel. For example, the Speakers Bureau is a standard of NASA’s public communication and outreach programs. Details about requesting speakers can be found at: http://www.nasa.gov/about/speakers/index.html.

Partnerships, however, come in many varieties, including some that require significant resource demands on NASA in terms of facilities, equipment, personnel, etc., and others that do not require any significant demands on NASA resources.

Proposers requesting access to NASA technical services or materials shall contact the NASA Centers (excluding JPL) from which services or materials will be requested in order to ascertain the availability and anticipated costs of such services or materials (see Appendix M: NASA Points of Contact).

If contact with a NASA Center or Mission Directorate or Office at NASA Headquarters does not receive a response, document the details of the requested NASA assets and the attempts to reach NASA within the budget justification of the proposal. Most costs that NASA Centers incur for
the use of facilities and contracted technical support are expected to come from non-CP4SMPVC funds, in accordance with NASA Policy Directive (NPD) 1388.1 Employee Participation in NASA Education and Communication Activities. (Full NPD at: http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1388&s=1)

Conflicts of Interest

NASA Employees: All NASA employees shall avoid Conflicts of Interest (COI) and strive to reduce the appearance of COI. Because this NRA is issued by NASA Headquarters, contracting or grants officers with input from NASA’s Office of the General Counsel will resolve Organizational Conflicts of Interest (OCI) or COIs related to proposal submission and review.

The Center Education Points of Contact identified in Appendix M will likely serve as Technical Officers for new CP4SMPVC awards. A NASA Technical Officer has primary responsibility for reviewing and approving annual reports that shall include key performance metrics. The NASA employees listed in Appendix M shall not assist in the development (or any formal pre-submission review) of specific proposals, including proposals from NASA Visitor Centers. This restriction begins on the release date of this NRA. Additionally, employees at NASA Headquarters who are internal reviewers for this NRA cannot “pre-read” proposals or provide letters of support or commitment to a proposing entity. Federal Government employees who are unable to avoid real or apparent COIs will not be permitted to participate in the proposal review process.

The CP4SMPVC management team does not provide COI guidance. NASA employees (other than those identified above) who plan to provide a written commitment or letter of support to a potential proposer should follow the policies and procedures in place at their employing center or facility and, if applicable or necessary, refer any questions about letters to their Center’s legal office.

Jet Propulsion Laboratory (JPL): As a Federally Funded Research and Development Center, the JPL has a Task Order with NASA’s Office of Education under NASA prime contract NNN12AA01C to provide technical support for the planning and implementation of NASA Headquarters’ Education Portfolio, including this CP4SMPVC NRA. To avoid any possible perception of a real or potential conflict of interest, JPL is not eligible to serve as a subcontractor, partner, or collaborator to an entity proposing under CP4SMPVC. Eligible institutions shall not contact JPL for letters of commitment or support prior to proposal submission, nor shall they contact JPL for cost estimates. JPL supports all CP4SMPVC applicants (as well as non-applicants) through the NASA Museum Alliance, a learning community of professionals at museums, planetariums, NASA Visitor Centers, YSOs, libraries, higher education institutions, and elsewhere (register at http://informal.jpl.nasa.gov/museum/alliance/). CP4SMPVC awardees shall cooperate with the CP4SMPVC Community managed by JPL, as well as with (as appropriate) the Museum Alliance.

3.6 Submissions from Non-Domestic Entities

If a proposing entity is not classified as a U.S. entity, then it is not eligible to propose in response to this NRA.
Proposals involving bilateral participation, collaboration, or coordination in any way with China or any Chinese-owned company, whether funded or performed under a no-exchange-of-funds arrangement, may be ineligible for award.

4. CERTIFICATIONS OF COMPLIANCE

See the Certifications and Assurance link on the NASA Grant and Cooperative Agreement page and the Guidebook for Proposers. Both can be found at the following site: https://naistst1.nais.nasa.gov/pub/pub_library/srba/index.html.

Once NASA selects a proposal for award, the NASA Grants Officer will request the proposer to provide additional certifications and will provide the proposer the special award conditions. These may include but are not limited to: Sample Special Language and/or Requirements for CP4SMPVC Awards (see Appendix F).

The Authorized Organizational Representative’s (AOR) signature automatically certifies that the proposing organization has read and is in compliance with the identified certifications, assurances, and representations.

5. PROPOSAL INSTRUCTIONS AND SUBMISSION INFORMATION

All information needed to respond to this announcement is contained in this CP4SMPVC announcement, the Guidebook for Proposers responding to a NASA Funding Announcement (FA) Edition: https://www.hq.nasa.gov/office/procurement/nraguidebook/, and the Grant and Cooperative Agreement Manual (GCAM).

5.1 Proposal Submission Date and Time

The AOR shall submit the electronic proposal shall be submitted in its entirety no later than 11:59 pm Eastern Time on the due date.

Proposers are responsible for understanding and complying with this NRA for the successful, timely preparation and submission of their proposals. Proposals that do not conform to this NRA’s requirements may be declared noncompliant and may not be forwarded to peer review.

On-time electronic submission is required for every proposal. While every effort is made to ensure the reliability and accessibility of the websites and to maintain a help center via e-mail and telephone, difficulty may arise at any point on the internet, including the user’s own equipment. Prospective proposers are urged to familiarize themselves with the NSPIRES or Grants.gov site and to submit the required proposal materials well in advance of the proposal submission deadline. Difficulty in registering with or using the NSPIRES or Grants.gov proposal submission systems is not, in and of itself, a sufficient reason for NASA to consider a late proposal. Proposers may contact the NSPIRES help desk by email at nspires-help@nasaprs.com or by calling, Monday through Friday from 8:00 am to 6:00 pm Eastern Time at (202) 479-9376, excluding federal holidays. The grants.gov contact center is available by email at support@grants.gov, or by calling 1-800-518-4726 and via website at http://www.grants.gov/.

5.2 Pre-proposal Teleconference

A pre-proposal teleconference will be held April 6, 2017 from 2:00 p.m. to 4:00 p.m. Eastern Time. Prospective proposers are requested to submit any written questions no later than two
business days before the teleconference so that NASA will be able to cover as much information as possible at the teleconference. NASA plans to post written questions and answers and teleconference charts to the NSPIRES website. An opportunity to ask questions and solicit clarification will be provided at the teleconference.

Interested proposers shall register in NSPIRES and sign up for notification emails so they will receive notice of this teleconference. To dial into the teleconference, call 888-323-4924. The participant passcode is 9687882. For relay services for the hearing impaired, call 711 at least 30 minutes before the call is to begin. (For more information on relay services refer to https://www.fcc.gov/guides/711-telecommunications-relay-service).

5.3 Submission of Proposals

All proposals submitted in response to this CP4SMPVC NRA shall be submitted in a fully electronic form. Hard copy proposal submissions will not be accepted. The PI at the lead institution shall submit the electronic NOI (see Section 5.6). Electronic proposals shall be submitted by the AOR at the PI’s institution. The AOR’s electronic submission of the proposal fulfills the requirement for signature of the proposal by an authorized official of the proposing institution.

Proposers may elect to submit proposals in response to this CP4SMPVC NRA via two different electronic proposal submission systems: either NSPIRES or Grants.gov. In all cases, registration on NSPIRES is required for review and award of any funded activity offered through this solicitation; therefore proposers are strongly encouraged to use the NSPIRES to submit their proposal. Proposals submitted on Grants.gov will be transferred to NSPIRES for review. If a proposer submits a proposal to both grants.gov and NSPIRES, NASA will review only the proposal submitted to NSPIRES. Additional information about NSPIRES and Grants.gov can be found in the Guidebook for Proposers. Note that entities may begin working in these systems as soon as the NRA is released. Further, entities may edit the required information as many times as needed until the proposal and accompanying cover sheet information are ready to submit.

The Guidebook for Proposers’ introductory materials, as well as the appendices, provide additional information about the entire application process, including NASA policies for the solicitation of proposals; guidelines for writing complete and effective proposals; and NASA’s general policies and procedures for the review and selection of proposals. Issuing and managing the awards to the selected institutions is also discussed.

As part of the electronic proposal submission process, proposers shall complete the Program Specific Data sheet (see Appendix G).

5.4 Registration

In order to submit a proposal, all team members and their institutions shall first be registered with NSPIRES (http://nspires.nasaprs.com).

Proposers submitting their proposals through Grants.gov shall also register with that site. Details of the multi-step registration process, which takes three (3) business days (or up to four (4) weeks if all steps are not completed in a timely manner) to register a new institution, are described in http://www.grants.gov/help/html/help/index.htm#t=Get_Started%2FGet_STARTED.htm.
An organization cannot register in NSPIRES until it has an active account in the System for Award Management (SAM - http://sam.gov). Once the DUNS and SAM steps are complete, then institutions and each team member shall register with NSPIRES and with Grants.gov if the proposer will use Grants.gov.

PLEASE NOTE: registration with NSPIRES is required in order to enable the complete transfer of the Grants.gov proposal to NASA for review. Linking a team member’s registration with its institution will automatically associate all required numbers (DUNS, CAGE, EIN) with the proposal. To identify the AOR, who also can register the institution if it is not already registered, the PI can contact his or her Sponsored Research Office (SRO). If that fails or there is no SRO, the NSPIRES Help Desk can determine who the AOR is from the SAM system. If an institution is not registered in SAM, then the point of contact from the SRO/Electronic Business Point of Contact shall register it in SAM. See Applicant Tools & Tips at http://www.grants.gov/web/grants/applicants/applicant-tools-and-tips.html.

Not later than the due date for proposals, proposers to this NRA shall have:

1) a Data Universal Numbering System (DUNS) number,
2) a valid registration with the System for Award Management (SAM),
3) a valid Commercial And Government Entity (CAGE) Code,
4) a valid registration with NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) (this also applies to all entities that are proposed for subawards or subcontracts.)

Every institution that intends to submit a proposal to this NRA, including the proposed lead institution or any partner whether an IEI, other non-profit institution, state and local Government agency, and any other organization that will serve as a subawardee or contractor, shall be registered in NSPIRES.

IMPORTANT INFORMATION FOR NON-PROFITS THAT ARE NOT MUSEUMS, YSOs, OR LIBRARIES

NASA grant policies also classify institutions of higher education, and only higher education institutions, as Education Organizations. NASA does not use the term “Education Organization” as a synonym for a non-profit organization. Refer to the definition of a non-profit organization in the Guidebook for Proposers.

If an organization has several different types of IEIs (e.g., a planetarium, an air or space museum, a natural history museum, aquarium, etc.), and has only used one DUNS number to request Federal funds, then the organization shall create a new DUNS number or a +4DUNS in order to submit more than one lead proposal under this NRA. If an organization submits more than one lead proposal using the same DUNS number without a qualifying +4DUNS, then all of that organization’s proposals will be disqualified from award consideration.

SAM registration issues for a +4DUNS should be addressed to the Federal Service Help Desk: https://www.fsd.gov/fsd-gov/home.do or 866-606-8220.

A non-solicited organization that already has both a DUNS number and a SAM number shall obtain a +4 extension to a DUNS number to distinguish its IEI. Dun and Bradstreet does not create or maintain this +4 extension. Rather, this 4-digit suffix is assigned at the discretion of the controlling business concern in order to identify sub-units or affiliates. The creation of a +4DUNS is solely at the discretion of the controlling organization that is registered in the SAM.
Registrants in SAM create this +4 extension to a DUNS number in SAM when there is a need for more than one bank/Electronic Funds Transfer (EFT) account for a location. The +4DUNS is created from an active record in the SAM. Please refer questions to the SAM’s Federal Service Desk Helpdesk at 866-606-8220. A submitter’s failure to provide a +4DUNS by the proposal’s submission date will disqualify the proposal from award consideration.

Technical note: A +4DUNS number is 13 digits and will not fit on the cover sheet form in NSPIRES, but shall be entered in the Program Specific Data form that is part of the NSPIRES requirements for CP4SMPVC proposals. On the NSPIRES coversheet an organization enters the 9-digit DUNS it shares with the operating/parent entity and shall enter the +4DUNS number in the Program Specific Data Form (see Appendix G).

5.5 Special Advisory Regarding Grants.gov Submission to CP4SMPVC

See Appendix H for specific advisories on the use of Grants.gov.

5.6 Notice of Intent to Propose

To assist in the planning of the proposal evaluation process, NASA strongly encourages all prospective proposers to submit in NSPIRES a Notice of Intent (NOI) to propose by 11:59 PM ET April 19, 2017. An NOI is not required, but is strongly encouraged. The information contained in an NOI is used to help NASA plan and expedite the proposal review activities; therefore, it is of considerable value to both NASA and the proposer. To be of maximum value, NOIs shall be submitted electronically by entering the requested information through NSPIRES at http://nspires.nasaprs.com/ by 11:59 PM ET April 19, 2017. Note that NOIs may be submitted directly by the PI; no action by an institution’s AOR is required to submit an NOI.

NOIs also assist NASA in establishing a peer review process that is free from conflicts of interest and that incorporates the requisite expertise. NOIs are informational descriptions of the anticipated content of the proposals. They are 400 words or less, and should include the following information:

- Title of proposal
- Proposing institution name and type (one or more of: Museum, Planetarium, NASA Visitor Center, Youth Serving Organization, Library).
- Anticipated Technical Content Area(s): Aeronautics, Earth Science, Microgravity, Space Exploration, Space Science
- Project Classification: (1) Project Development and Implementation, (2) Pilot Project, (3) Combination of (1) and (2).
- Anticipated Project Goal(s), Objectives, and Intended Outcomes
- Anticipated partner organizations
- Primary anticipated target audience(s) (include age range for youth audiences)
- Anticipated area of reach (specify the area and indicate whether it be a locality, city, region, national, etc.)
- Anticipated types of programs and products to be developed

Grants.gov does not provide NOI capability; therefore, NOIs shall be submitted via NSPIRES regardless of whether the proposal will be submitted via NSPIRES or Grants.gov. Prospective proposers shall register with NSPIRES before it can be accessed for use. Since NOIs submitted
after these deadlines may still be useful to NASA, late NOIs may be submitted by email as directed in the *Guidebook for Proposers*.

The submission of a NOI is not a commitment to submit a proposal, nor is information contained therein considered binding on the submitter. NOIs will be treated as competition-sensitive material. NASA does not provide feedback on NOIs. Additional information about the NOI can be found in the *Guidebook for Proposers*.

### 5.7 Team Member Confirmation

Each individual team member (e.g., Co-Is, collaborators, etc.), included in the proposal’s electronic cover page, shall confirm their participation on that proposal (indicating team member role) and specify an institutional affiliation. For proposals submitted via NSPIRES, this confirmation is via NSPIRES. For proposals submitted via Grants.gov, this confirmation is via “Statements of Commitment” included within the proposal. The institutional affiliation specified on the cover page shall be the institution through which the team member would work and receive funding while participating in the proposed investigation. If the individual has multiple affiliations, then this institution may be different from the individual’s primary employer or preferred mailing address. **Any institution requesting NASA funds through the proposed investigation shall be listed on the Proposal Cover Page.** Team members shall ensure that their contact information is current. Changes can be made using the “Account Management” link on the “NSPIRES Options” page. These individuals shall perform this registration themselves; **no one may register a second party,** even the PI of a proposal in which that person is committed to participate. A proposal cannot be submitted if an organizational relationship is missing for any team member.

### 5.8 Withdrawal of Proposals

The proposer may withdraw proposals at any time before award. Proposers shall timely notify NASA if the proposal is funded by another institution or of other changed circumstances that necessitate withdrawal of the proposal.

### 5.9 Questions Related to this NRA

Any clarifications or questions and answers that are published will be posted on the CP4SMPVC NSPIRES web page. Interested proposers shall routinely check for such information prior to submitting their proposals.

Clarification questions regarding this solicitation shall be submitted in writing or via E-mail to the addresses below as soon as possible but no later than 10 days prior to the proposal due date.

Submit general questions about CP4SMPVC in writing to:
CP4SMPVC Manager
Leslie L. Lowes
Jet Propulsion Laboratory
California Institute of Technology
Email: CP4SMP@jpl.nasa.gov

If no response is received within five (5) days, proposers may contact the CP4SMPVC Technical Officer:

Beverly Girten
NASA Office of Education Institutional Engagement Line of Business Director
 NASA Headquarters
Washington, DC 20546

Under the terms of Caltech/JPL’s contract with NASA, JPL will refer CP4SMPVC questions from NASA Visitor Centers to NASA Headquarters for a response. Alternatively, NASA Visitor Centers can submit questions, in writing, directly to the CP4SMPVC Technical Officer.

**Inquiries about On-line Submission of Proposal Materials through NSPIRES**

Address questions about a proposal submitted to or pending in NSPIRES to:

Althia Harris  
NASA Research & Education Support Services  
2345 Crystal Drive, Suite 500  
Arlington, VA 22202  
202-479-9030 ext. 310  
202-479-0511 (fax)  
Email: aharris@nasaprs.com

If there is no response or it is after hours, contact the NSPIRES Help Desk at nspires-help@nasaprs.com or call 202-479-9376 between 8:00 a.m. and 6:00 p.m. Eastern Time, Monday through Friday, except on Federal holidays

**5.10 Conflict of Interest Check Information**

NASA expects all peer reviewers and/or panelists to disclose all conflicts of interest (see the Guidebook for Proposers). Peer reviewers are also expected to disclose situations that may give the appearance of bias, or that may cause a reasonable observer to question the reviewer’s ability to provide an unbiased evaluation of a proposal. Peer reviewers are required to sign a nondisclosure/conflict of interest form prior to being granted access to proposals. **To facilitate review for conflicts, any institution requesting NASA funds through the proposal SHALL be listed on the proposal cover page.**

**5.11 Other Submission Requirements**

All proposals shall comply with the general requirements of this NRA. Upon receipt, proposals will be reviewed for compliance to ensure that the proposal includes the following:

- Feature of NASA-themed content in space exploration, aeronautics, space science, Earth science, or microgravity.
- Submission of a complete proposal with all required elements.
- Submission of a proposal from an eligible proposer as specified in the Eligibility Information. (Section 3 of this NRA).
- Submission of a budget narrative that includes details of any subawards and that is for a funding period consistent with this NRA.
- Submission of a proposal that is consistent with the page limitations and formatting guidelines specified in this NRA and the Guidebook for Proposers.

At NASA’s discretion, non-compliant proposals may be rejected and not evaluated further.
Disqualified proposals that were submitted through Grants.gov will be declined administratively as “noncompliant with the NRA”. Disqualified proposals that were submitted through NSPIRES will be returned without review using the NSPIRES “Return Proposal” function.

NASA is implementing a process to collect demographic data from grant applicants for the purpose of analyzing demographic differences associated with its award processes. Information collected will include name, gender, race, ethnicity, disability status, and citizenship status. Submission of the information is completely voluntary and is not a precondition of award.

5.12 Content and Format of the Proposal Submission

Required elements of the proposal as described below shall be submitted via the NSPIRES website or Grants.gov. It is recommended that where practical, proposers assemble their proposal into a single PDF document (except the NSPIRES-generated Proposal Cover Page) prior to uploading the proposal. Proposers shall comply with all format requirements identified in this NRA and in the Guidebook for Proposers. Please refer to the Guidebook for Proposers for more information on proposal submission procedures and important guidelines for style formats. A sample proposal cover page is in Appendix J.

NASA Requirements for Uploaded PDF Files

It is essential that all PDF files submitted meet NASA requirements. This will ensure that the submitted files can be accepted by NSPIRES regardless of whether the proposal is submitted via NSPIRES or Grants.gov. This will also ensure that proposals can be read by community reviewers and NASA staff using a wide variety of computers, operating systems, and PDF readers. At a minimum, it is the proposer’s responsibility to ensure:

1. that all PDF files are unlocked and that edit permission is enabled—this is necessary to allow NSPIRES to integrate submitted files into a single PDF document for review,
2. that all fonts are embedded in the PDF file, and
3. that only Type 1 or TrueType fonts are used.

In addition, any proposer creating files using TeX or LaTeX shall first create a DVI file and then convert the DVI file to Postscript and then to PDF.

All proposers are encouraged to reference http://nspires.nasaprs.com/tutorials/PDF_Guidelines.pdf for more information on creating PDF documents that are compliant with NSPIRES. There have been recent occurrences in which pdf files produced using newer versions of Microsoft Word have not been properly accepted into NSPIRES. NSPIRES is unable to accept PDF files that do not meet NASA requirements. If NSPIRES is unable to accept a proposal, NASA may determine it to be noncompliant and decline such proposal without further review.

Assembly of Electronic Proposals

The project description and other required sections of the proposal shall be submitted as searchable, unlocked PDF files that are attached to the electronic submission. Proposers shall comply with any format requirements specified in this NRA and in the NASA Guidebook for Proposers. Only appendices/attachments that are specifically requested in either this NRA or in the NASA Guidebook for Proposers will be permitted. Proposals containing additional appendices/attachments may be declared noncompliant and not forwarded to peer review. Refer to Appendix K for more information about statements of commitment and letters of support.
the case of any conflict between the content of this NRA and the *Guidebook for Proposers*, this NRA takes precedence.

<table>
<thead>
<tr>
<th>Proposal Elements</th>
<th>Page Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NSPIRES Cover Page and Budget Form</strong>: The NSPIRES Cover Page is generated online and contains the following:</td>
<td>1 or more—NSPIRES will generate the necessary number of pages</td>
</tr>
<tr>
<td><strong>Proposal Information</strong>: PI information, proposal title, proposed start and end dates, submitting institution information, certification and authorization.</td>
<td></td>
</tr>
<tr>
<td><strong>Certifications Regarding Lobbying, Disbarment, Suspension and Other Responsibility Matters</strong>: The AOR’s signature on the Proposal Cover Page automatically certifies that the proposing organization has read and is in compliance with these certifications. No additional form is necessary. See 2 CFR 1800 Appendix A (<a href="https://prod.nais.nasa.gov/pub/pub_library/srba/index.html">https://prod.nais.nasa.gov/pub/pub_library/srba/index.html</a>)</td>
<td></td>
</tr>
<tr>
<td><strong>Team Members</strong>: Names, institution and contact information (Notes: Each team member shall register him/herself in NSPIRES and complete all required data. Each team member shall establish an organizational relationship; i.e., identify the organization or other auspices through which the individual is participating in the proposal. A proposal cannot be submitted if an organizational relationship within NSPIRES is missing for any team member.)</td>
<td></td>
</tr>
<tr>
<td><strong>Proposal Title</strong>: Include a meaningful title for the proposed project. DO NOT simply state CP4SMP or Visitor Center Proposal. (Note: Title length may not exceed 255 characters including spaces.)</td>
<td></td>
</tr>
<tr>
<td><strong>Project Summary</strong> (<em>max. 4000 characters</em>): Provide a brief description of the project, including objectives, targeted audience, partners, method of approach, relevance to NASA themes, use of NASA content, and outcomes.</td>
<td></td>
</tr>
<tr>
<td><strong>Budget Figures</strong>: Include figures for all years (up to five (5)) of the proposed project in the spaces provided. This is the total budget, including any subawards.</td>
<td></td>
</tr>
<tr>
<td>Note: Sample Cover Pages are located in Appendix J of this NRA. NASA will not fund institutions that are not listed on the Proposal Cover Page. This includes NASA Centers.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong>: To improve proposal reviewability, submit one PDF file to NSPIRES that begins with the Table of Contents and includes all information described below:</td>
<td></td>
</tr>
<tr>
<td><strong>Table of Contents (TOC)</strong></td>
<td></td>
</tr>
<tr>
<td>NSPIRES does not offer a stand-alone TOC file upload choice. If not uploading a complete end-to-end proposal in a single PDF, include a TOC as the first page(s) of the project description even if that makes the project description longer than 15 pages.</td>
<td>1-2 pages</td>
</tr>
<tr>
<td><strong>Project Description</strong>: A detailed description of the proposed plan. The Project Description shall contain, at a minimum, the following elements, as described in detail in Appendix L Proposal Element Details: (1) Relevance to NASA’s and this NRA’s Objectives, (2) Technical Project Plan, (3) Management and Evaluation; and (4) Past, Current, and Pending Funding Performance. Page limit includes all illustrations, tables, and figures, where each “n-page” foldout counts as n-pages and each side of a sheet containing text or an illustration counts as one page.</td>
<td>maximum 15 pages</td>
</tr>
<tr>
<td>See Section 6.1 of this NRA for a detailed description of the evaluation criteria.</td>
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</tr>
<tr>
<td>Proposal Elements</td>
<td>Page Guideline</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>References and Citations</td>
<td>1 or more (if applicable)</td>
</tr>
<tr>
<td><strong>Biographical Sketches:</strong> Submit sketches for key personnel using the guidelines from the Guidebook for Proposers and references therein.</td>
<td>Pl: max 2 pages&lt;br&gt;Each Co-I and Other Key Personnel: max 1 page</td>
</tr>
<tr>
<td>Past, Current and Pending Support</td>
<td>1 or more (if none, so state)</td>
</tr>
<tr>
<td>Statements of Commitment and Letters of Support (Guidebook for Proposers and Appendix K of this NRA.)</td>
<td>1 or more (if appropriate)</td>
</tr>
<tr>
<td>Program Specific Data (PSD)— Appendix G of this NRA is only available as an NSPIRES Template. WARNING: Grants.gov does not contain this PSD template. Therefore, Grants.gov submitters shall include the PSD response immediately before the proposal’s Table of Contents.</td>
<td>NSPIRES-generated</td>
</tr>
<tr>
<td>Budget Justification: Narrative and Details: Include a budget breakdown for each year of proposed work, along with total budget figures for the entire period of performance.</td>
<td>1 or more</td>
</tr>
<tr>
<td>WARNING: A peer review panel finding of “insufficient information to properly evaluate cost realism” will be considered a proposal weakness. Inconsistent information between budget descriptions and the proposal text will also be considered a proposal weakness.</td>
<td></td>
</tr>
<tr>
<td>Appendix M Proposal Element Details provides details on budget submission.</td>
<td></td>
</tr>
<tr>
<td>Facilities and Administrative (F&amp;A)/Indirect Costs: Identify F&amp;A/indirect cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If approved audited rates are not available, provide the computational basis for the indirect expense pool and the corresponding allocation base for each proposed rate.</td>
<td></td>
</tr>
</tbody>
</table>

Linked/Appended material (other than required forms) will not be considered or reviewed.

If appropriate, proposers shall budget and document compliance with the Code of Federal Regulations (CFR), 14 CFR §1230, commonly referred to as “the Common Rule for the Protection of Human Subjects.” Research to develop NASA-themed exhibits, programs, curriculum products, etc., may involve full human subjects review through an Institutional Review Board (IRB) or it may be exempt. An IRB also certifies when research is exempt. Research using surveys, observational or ethnographic methods, cognitive and educational tests, etc., is “exempt” unless the following two conditions apply: 1) the information would allow subjects to be identified, and 2) disclosure of the data would reasonably place the subject at risk.
of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation. It is anticipated that most research will be exempt and that non-exempt research will not involve NASA facilities, personnel or equipment or the NASA IRB18 and http://irb.nasa.gov/. Before submitting a proposal, the PI shall determine whether any proposed research activities require IRB approval or is exempt. The Department of Health and Human Services Office of Human Research Protection (HHS OHRP) sponsors a website and IRB Training that may be helpful. Visit https://phrp.nihtraining.com/users/login.php and http://ohrp.cit.nih.gov/search/irbsearch.aspx?styp=bsc.

**DATA Management Plan**
In accordance with the NASA Plan for Increasing Access to the Results of Scientific Research (http://www.nasa.gov/sites/default/files/files/NASA_Data_Plan.pdf), if research will be conducted under the proposed project, proposals are required to include a Data Management Plan (DMP). If research will not be conducted under the proposed project, the proposer should note in the associated field in the Program Specific Data Form that the DMP is not applicable because no research will be conducted. If research will be conducted, but the proposer believes a DMP is not required because of the nature of the activity (e.g., no data, or proprietary or personally identifiable data are expected), then a statement should be included to that effect. Also see the following link for more information: https://www.nasa.gov/open/researchaccess.

6. **PROPOSAL EVALUATION AND SELECTION**

6.1 **Proposal Review Criteria**
Proposals will be evaluated based on the following criteria: (1) **Intrinsic Merit**, (2) **Relevance to NASA**, and (3) **Budget/Cost**. The evaluation criteria are based upon NASA’s 2014 Strategic Plan, NASA’s Guidebook for Proposers, and federal education priorities and strategic directions. The project description shall reflect the unique ability of the lead institution and any partners to further the goals and objectives stated in Section 1.3.1. It shall clearly and concisely illustrate the alignment with NASA’s 2014 Strategic Plan and the NASA/federal education priorities and strategic directions. Proposers are expected to provide sufficient detail to enable review by persons who are knowledgeable in, but not necessarily specialists in, the proposed technical area. Proposal reviewers may include personnel from NASA, individuals working in federal, state or local agencies, industry, philanthropic foundations, K-12 and institutions of higher education, firms providing evaluation of educational projects, and all types of non-competing IEIs.

Note: Cost sharing will not advantage or disadvantage a proposal in the peer review evaluation process, and is not an evaluation factor in the consideration of which proposals receive awards.

6.1.A. **Intrinsic Merit (40%)**
Evaluation of **Intrinsic Merit** will consider that the sub-elements are clear, reasonable and properly aligned with the overall project goals & objectives. There are four (4) sub-elements under this criterion. They are:

**Quality and Feasibility**
• The degree to which the project has clear goals and objectives that are aligned with the emphasis of this NRA and NASA Strategic Objective 2.4
• The degree to which the project demonstrates a workable plan for achieving its goals and objectives, and uses or develops evidence-based educational strategies in designing and implementing the project.
• The degree to which the project includes a plan that is clearly organized and has clear lines of communication with NASA and/or other partners regarding responsibilities.
• The degree to which the project includes a plan that is consistent with the budget and demonstrates a high probability for successful project implementation.
• The degree to which the project demonstrates the relevancy of the project goals and objectives to the institution where the supported activities will reside or be led, the proposing organization’s capacity and experience for conducting the proposed activities, and the pre-proposal depth of programming and professional staffing.

Audience and Stakeholder Focus

• The degree to which the project addresses substantiated (e.g., through an existing needs assessment or other evidence) national, regional or local educational needs or challenges.
• If a pilot project is proposed, the degree to which the project includes a plan for providing evidence, findings, and/or deliverables that form the basis of anticipated further innovative work including evidence-based strategies.
• The degree to which the project identifies all target audiences and stakeholders (internal and external), specifies what their needs are, and how those needs will be addressed.
• The degree to which the project provides representation of target audiences in the development of the project.
• The degree to which the project takes into account the accuracy and user-friendliness of resources produced and methods of tracking progress.

Partnerships

• The degree to which the project includes one or more partners in its design, development, evaluation, and dissemination.
• The degree to which the project has partners with well-defined roles and responsibilities, including (as appropriate) for project expansion or sustainability, and indicate the capabilities that the partner is adding.

Project Evaluation (1/4 of Intrinsic Merit weight, or 10%)

Evaluation of Project Evaluation includes consideration of the following criteria:

• The Evaluation Plan is appropriate for the scope of the project;
• Evidence that the Evaluation Plan can be successfully implemented (e.g., citation from independent Evaluators statement of endorsement, some measurable data (i.e., number of completed surveys) or interview transcripts, etc.).
• There is an appropriate evaluation plan/process in place to document outputs, impacts, and outcomes that demonstrate progress toward achieving objectives of proposed project activities and objectives/priorities of the NRA.
• Evidence that appropriate evaluation processes are embedded throughout the life-cycle of the project;
• The project demonstrates how its plans lead to a measurable impact on learner interest in and positive attitudes towards STEM topics and improve self-perception of the learner’s ability to participate in STEM, and how this will be measured.
• Plans for formative and summative project evaluations are well-constructed and the independence of the personnel providing the evaluation is clear.
• The forms of evaluation are based upon reputable models and techniques appropriate to the content and scale of the project. Evaluation methods provide useful information on the effectiveness and/or impact of the proposed project, and the project implements improvements based on evaluation evidence.
• The project has specific and sufficient resources dedicated to evaluation activities in the detailed work plan, project budget, and schedule of completion. The evaluation budget is a minimum of 8% of the overall project budget.

6.1.B. Relevance to NASA (40%)
There are three (3) sub-elements under this criterion. They are:

Content
• Degree to which the project goals and objectives are relevant to Mission Directorate(s) or other participating NASA Offices. The project clearly addresses content and educational priorities of the NASA technical content areas.
• Degree to which the project makes direct use of appropriate NASA content, people, facilities, educational resources, or current and former NASA grantees and their work and results (including previous CP4SMPVC grants), or other partners. The project uses NASA-themed educational activities and assets, or provides a justification as to why a new NASA-related asset is proposed for use rather than an existing one.
• Degree to which the project leads to experiential authentic STEM opportunities that encourage innovation, critical thinking, and problem solving skills.

Continuity
• Degree to which the project activities relate to NASA or NASA’s career pipeline.
• Degree to which the project will provide linkages to improve STEM education across the learning environment, if appropriate.
• Degree of effectiveness of methods for attracting students, teachers, and diverse stakeholders to further formal or self-directed study in NASA STEM fields, and where possible, supports continuity of participant experience by including a plan to direct participants to other existing NASA educational opportunities.
• Degree to which the project demonstrates continuity of information flow to the customers over an extended period of time.
• Degree to which the plan is clear and appropriate for sharing the products generated during the project and describing how the evaluation results will be shared beyond the immediate project team and organization.
Diversity

- Degree to which the project is designed to make a demonstrable contribution to attracting diverse populations to NASA missions or NASA-STEM related educational activities and to future careers in STEM.
- Degree to which the project includes plans to serve, as target audiences, groups historically underrepresented and underserved in STEM fields as specified in the NRA.
- Degree to which the project has a strong outreach plan to effectively reach appropriate audiences, using culturally appropriate means to include underrepresented and underserved groups, including people with disabilities.
- Degree to which geographical diversity, especially in outreach and retention efforts, is addressed.

6.1.C. Budget/Cost (20%)

- The proposed budget is adequate, appropriate, reasonable, and realistic.
- The proposed budget demonstrates the effective use of funds.
- The proposed budget includes a clear alignment between the proposal narrative and budget;
- The proposed budget demonstrates the effective use of funds for which outcomes justify total costs; and
- All proposed budget line items are explained and justified.
- The proposed budget follows the requirements, guidelines, and limitations set forth in this NRA.

6.2 Review and Selection Processes

Proposal external peer review functions for CP4SMPVC have been contracted to JPL. However, the authority and responsibility for eligibility determinations and award selection decisions remain with NASA. Proposals will be reviewed as follows:

1) Eligibility or Compliance with the NRA: Proposals will be assessed by NRA’s Technical Officer or designees for eligibility with regard to the PI, institution, and technical content. If a proposal fails to meet one or more of the eligibility criteria, NASA reserves the right to disqualify that proposal from further review.

2) Proposals will be peer reviewed by experts external to NASA, which may include, but are not limited to: individuals working in STEM education in federal, state or local agencies, industry, at non-competing IEIs, philanthropic foundations, K-12 schools or districts, institutions of higher education, firms providing evaluation of educational projects, etc. Individuals not associated with a CP4SMPVC proposal are encouraged to register at NASA Informal Education’s “Become a Reviewer” website at https://informal.jpl.nasa.gov/reviewer.

3) Externally reviewed proposals and external reviewer comments will be provided to NASA Headquarters employees who will recommend to the Selecting Official which proposals have a higher or lower priority for funding relative to mission priorities. Internal NASA experts will also handle any multi-agency STEM coordination concerns that arise.

NASA typically receives a far greater number of competitive or peer-reviewed proposals than available funds can support. External expert advice is a consideration for NASA when making
selection decisions. For example, representatives from the affected NASA Mission Directorates and Offices review the external peer review findings and offer priority recommendations to the Selection Official. NASA seeks a balanced project award portfolio and considers factors including, but not limited to, geographic representation, NASA technical content, current awards, institutional representation, and participation by individuals traditionally underrepresented in STEM studies and careers.

6.3 Review of Applicants in the Federal Awardee Performance and Integrity Information System (FAPIIS)

A NASA Grant Officer will conduct a pre-award review of risk associated with the proposer as required by 2 CFR 200.205. For all proposals selected for award, the Grant Officer will review the submitting organization’s information available through the Federal Awardee Performance and Integrity Information System (FAPIIS) and the System for Award Management (SAM) to include checks on entity core data, registration expiration date, active exclusions, and delinquent federal debt.

Prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold (currently $150,000), NASA is required to review and consider any information about the applicant that is in the designated integrity and performance system (currently FAPIIS) accessible through SAM (https://www.sam.gov) (see 41 U.S.C. 2313). An applicant, at its option, may review information in FAPIIS and comment on any information about itself that NASA previously entered and is currently in FAPIIS. NASA will consider any comments by the applicant, in addition to the other information in FAPIIS, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205 Federal awarding agency review of risk posed by applicants.

7. AWARD ADMINISTRATION INFORMATION

7.1 Notice of Award

NASA is committed to announcing selections and initiating awards as quickly as possible, consistent with ensuring the quality of the selection and award process and subject to the appropriation of Federal funds for the initiation of new awards.

Every effort will be made to announce selections within nine (9) months from the proposal submission deadline. The initiation of the award typically occurs between 45 and 90 days after the announcement of selections (see NASA Guidebook for Proposers).

NASA has no obligation to evaluate ineligible proposals or those that do not meet all stated requirements (see NASA Guidebook for Proposers).

In all cases, only after the Selecting Official’s approval is obtained, any proposals recommended for funding will be forwarded to the NASA Grant Officer for final eligibility review of business, financial, and policy implications and the processing and issuance of a grant or cooperative agreement.

NASA may elect to offer selection of only a portion of a proposed project, usually at a level of support that is reduced from that requested in the original proposal. NASA may also offer tentative selections in which NASA requests proposers to team on a joint project. Additionally, NASA may decide to award an effort for less than the full duration of the proposal. In any case, the proposer will be able to accept or decline such a selection. If the proposer accepts such an
offer, a revised budget and statement of work (proposal) may be required before NASA can initiate funding action on the proposal. If the proposer declines the offer of a partial selection or participation in a joint proposal, NASA may withdraw the offer of selection in its entirety.

Proposers are cautioned that only a NASA Grant Officer may make commitments, obligations or awards on behalf of NASA or authorize the expenditure of funds. The Grant Officer is also referred to as an Award Officer in the NASA Guidebook for Proposers. No commitment on the part of NASA should be inferred from technical or budgetary discussions with any NASA individual other than the Grant/Award Officer, including discussions with a NASA employee, contractor, or JPL employee including informal education managers, Mission Directorate employees, or support office coordinators. A PI and/or institution that makes financial or personnel commitments in the absence of a written instrument signed by a NASA Grant Officer does so at their own risk. Grant or cooperative agreement awards are made to the proposing institution, not to the proposed PI.

Notification of both the selected and the non-selected proposals will be consistent with the policy stated in the NASA Guidebook for Proposers. For selected proposals, a NASA Grants Officer, who is the only official authorized to obligate the Government, will contact the offeror’s business office. The NASA Shared Services Center (NSSC) will handle negotiation and award of any grants or cooperative agreements. Any costs that the proposer incurs in anticipation of a grant or cooperative agreement award will be subject to the policies and regulations of 2 CFR 1800.209. Expenditures incurred within the 90-day period preceding the effective date of the award may be authorized by the recipient organization, but such expenditures are made at the recipient’s risk. Disbursements after the scheduled expiration date of the award may be made only to honor documented commitments made on or before the expiration date.

In order to announce selection decisions for grants and cooperative agreements as soon as is possible, even in the presence of budget uncertainties, the Selection Official may defer selection decisions on some proposals while making selection decisions on others. If a Selection Official uses this option, then proposals will be either “selected,” “not selected at this time,” or “not selected”.

Proposals that are “not selected at this time” may be considered for a supplemental selection when circumstances allow. All proposers that receive “not selected at this time” will eventually be notified whether their proposal is selected through a supplemental selection or is no longer being considered for a supplemental selection.

Copies of external reviews, excluding the names of the reviewers and other data covered by the Privacy Act, typically are made available to the AOR and/or PI when they log in to NSPIRES after the decision notice is sent. A POC for all peer review questions will be provided at the time of selection notification. In all cases, only after approval is obtained from the Selecting Official, any proposals recommended for funding will be forwarded to the NSSC for final eligibility review of business, financial, and policy implications and the processing and issuance of a grant or cooperative agreement.

Proposers that are not selected will be notified by postal or electronic mail and offered a debriefing consistent with the policy in the NASA Guidebook for Proposers.

7.2 Process for Appeals Prior to Formal Requests for Reconsideration
This NRA is limited to awarding grants and cooperative agreements and will not result in the award of contracts except when required by statute or by NASA-specific regulations related to NASA Visitor Centers and Centers. Accordingly, the appeals and reconsideration processes under this NRA do not include protest rights either at the U.S. Government Accountability Office (GAO) or with the Agency, as defined in FAR 33.101. The provisions at FAR 52.233-2 (“Service of Protest”) and NFS 1852.233-70 (“Protests to NASA”) do not apply to this NRA.

A PI who is not satisfied with the explanation of the basis for the declination of its proposal may contact the CP4SMPVC Technical Officer in writing (delivered via e-mail, fax or regular mail) stating the reasons for requesting reconsideration of the declination and requesting an oral debriefing before initiating a formal Request for Reconsideration. (See Formal Requests for Reconsideration that follows.) The Technical Officer shall provide the debriefing expeditiously; i.e., usually within two weeks. Proposers shall send a first request for an oral debrief to cp4smp@jpl.nasa.gov and to:

Beverly Girten
NASA Office of Education Institutional Engagement Line of Business Director
NASA Headquarters
Washington, DC 20546
Email: Beverly.E.Girten@nasa.gov

Appeals or reconsiderations will be limited to the original proposal submitted by the due date. Appeals or requests for reconsideration based on results or information obtained after the proposal was submitted or peer reviewed, for example, are not appropriate. Furthermore, because factors such as program budget and other priorities play a role in the selection process, reconsideration will not necessarily result in an award even if it is determined that there was an error in the peer review evaluation or other evaluation processes.

**Formal Requests for Reconsideration**

(i) Written Request for Reconsideration to Selecting Official. Following an oral debriefing with the CP4SMPVC Technical Officer, if the PI is still not satisfied that the proposal’s evaluation process was fair and reasonable, substantively and/or procedurally, then that PI may request a formal reconsideration within 30 days of the debriefing. The Selecting Official will respond in writing to the Request for Reconsideration within 30 calendar days of receipt of the request. If the Selecting Official requires additional time to prepare a response, he or she will send the PI an explanation of the need for an extension within 30 calendar days.

Following a response from the Selecting Official, if the PI is still not satisfied with the Selecting Official’s decision, the PI may request a formal reconsideration within 30 days of the Selecting Official’s decision. Electronic or faxed requests for formal reconsiderations will not be accepted. Formal requests shall: 1) detail the reasons for the reconsideration request; 2) be printed on institutional letterhead; 3) be co-signed by the PI and the AOR; and 4) be addressed to the Deputy Associate Administrator for Education:

Deputy Associate Administrator for Education
NASA Headquarters
Washington, DC 20546
Telephone: 202-358-0711
(ii) Appeals above the Deputy Associate Administrator for Education (DAAE). Appeals above
the DAAE shall be filed within 30 calendar days of receipt of that decision. The written appeal
shall be submitted to the Associate Administrator for Education or the Assistant Administrator of
the Mission Directorate or Office issuing the solicitation. A response to the appeal will be
provided to the PI within 30 calendar days.

7.3 Administrative and National Policy Requirements

Grant and cooperative agreement awards are subject to the regulations at 2 CFR 200 and the
NASA Grant and Cooperative Agreement Manual (GCAM), located at
https://naistst1.nais.nasa.gov/pub/pub_library/srba/index.html. The GCAM consists of eight
sections that prescribe the policies and procedures relating to the award and administration of
NASA grants and cooperative agreements.

7.4 Award Reporting Requirements

The reporting requirements for awards made through this NRA will be consistent with Exhibit E

All recipients receiving an award through this NRA will be required to submit annual and
interim reports using the Preferred Education Project Report. Project Reports, whether progress,
interim or final, are a comprehensive summary of significant accomplishments during the
reporting period or the duration of the grant. Details are available at:
http://www.hq.nasa.gov/office/procurement/nraguidebook/.

On behalf of NASA Education, the CP4SMPVC manager collects data about grantee activities
and reports program results. Proposals selected for funding under this NRA shall contribute to
NASA’s annual performance measurements for education. Details on NASA’s requirements will
be made available at the time of award and communications from the CP4SMPVC manager will
be ongoing during the period of performance. Contributions of individual projects towards
education performance will also be determined at that time. NASA’s current measures and plans
can be found at

Project key personnel and/or participants are strongly encouraged to write and submit journal
and proceedings articles and to participate in NASA-sponsored and other professional
conferences. Proposers shall outline these plans in their project description.

Award recipients may also be subject to reporting requirements under the NASA Plan for
Increasing Access to the Results of Scientific Research such as submitting approved peer-
reviewed manuscripts and metadata to a designed repository, and reporting publications with the
annual and final progress reports. Any such requirements will be identified in the Notice of
Award.

If the Federal share of any award issued under this NRA is more than $500,000 over the period
of performance, additional reporting requirements will apply. See 2 CFR 200 Appendix XII—
Award Term and Condition for Recipient Integrity and Performance Matters
(https://www.ecfr.gov/cgi-bin/text-idx?SID=4b63b1740bdb186d3bf5d346f5ddf42c&mc=true&node=ap2.1.200_1521.xii&rgn=div9)
8. POINTS OF CONTACT FOR FURTHER INFORMATION

Additional information can be obtained from the following sources:

**CP4SMPVC Acting Manager**
Leslie L. Lowes
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, CA
CP4SMP@jpl.nasa.gov

Points of Contact for NASA Mission Directorates, Centers, and Support Offices

Prospective proposers are encouraged to contact the CP4SMPVC Points of Contact (POC) in the mission directorates, centers, and support offices for general information about NASA missions, science, technology, facilities, and education programs. See Appendix M. Questions relating to what is considered NASA scientific or technical content eligible for projects submitted to this solicitation should be directed to the appropriate contacts identified in the appendix.

**The POCs in Appendix M are not eligible to be listed as key team members in any proposal submitted in response to this NRA:** NASA employees and contractors have the option (not obligation) to respond to a proposer who desires to estimate the costs to include non-specific NASA resources (human or material) in a proposed project. Such cursory budget-related assistance does not commit NASA to the proposed project. For more information regarding how to document a specific NASA commitment (for example a named individual or facility) to a proposed project, see Appendix K Statements of Commitment and Letters of Support. A partnership with NASA is not required for an entity to submit a proposal to or to be selected for an award under the CP4SMPVC NRA.

Please note that no CP4SMPVC POCs nor any other NASA or JPL personnel are permitted to pre-review or co-write CP4SMPVC proposals.

9. ANCILLARY INFORMATION

9.1 Announcement of Updates/Amendments to Solicitation

Additional programmatic information for this NRA may develop before the proposal due date. Such information will be added as a Frequently Asked Question (FAQ) or formal amendment to this NRA and posted at NSPIRES homepage at [http://nspires.nasaprs.com/](http://nspires.nasaprs.com/)(select “Solicitations” then “Open Solicitations” then “NNH17ZHA002N”). Prospective proposers shall regularly check this NRA’s homepage for updates concerning the activity(s) of interest. FAQs may be updated until the proposal due date.

When new FAQs are posted, a notice will be sent via the NASA Education Express listserv. To subscribe to NASA Express, go to: [http://www.nasa.gov/education/express](http://www.nasa.gov/education/express).

9.2 Access to NASA facilities/systems

Personal Identity Verification (PIV) of Grant/Cooperative Agreement Personnel

If any proposal personnel are expected to work on a NASA Center, they shall comply with the NASA *Guidebook for Proposers* and the Grant and Cooperative Agreement Manual, Appendix
C. These sections provide information about recipients needing access to a NASA Center, facility, or computer system, or to NASA Technical Information, which requires “Personal Identity Verification of Recipient Personnel.”

All award recipients shall work with NASA program staff to ensure proper credentialing. Such individuals include U.S. citizens, lawful permanent residents ("green card" holders), and foreign nationals (those who are neither U.S. citizens nor permanent residents).

9.3 Limited Release of Proposers’ Confidential Business Information

It is not NASA’s intent to publicly disclose proprietary information obtained during this solicitation. To the full extent that it is protected pursuant to the Freedom of Information Act and other laws and regulations, information identified by a respondent as “Proprietary or Confidential” will be kept confidential. NASA may use contractor support personnel to assist in providing expertise regarding proposals. Any support contractor involved in the evaluation process shall be free of conflicts of interest, will be bound by appropriate non-disclosure obligations to protect proprietary and competition sensitive information. By submitting a proposal under this Announcement, the proposer is deemed to have consented to release of data in its proposal to NASA contractors supporting evaluation of proposals.
APPENDIX A. Technical and Education Content Descriptions.

1. NASA Mission Directorate and Office of Education (OE) Priorities

Proposals shall explicitly address one or more of the technical content areas summarized below and align these areas with their content and education priorities, as expressed below.

Information on the science and technology objectives of each of the NASA Mission Directorates can be found in the NASA Strategic Plan at http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf.

Clarifications and additional details are available through the NASA Directorates points-of-contact listed in Appendix D of this solicitation.

The NASA Centers and JPL are responsible for implementing many of the plans, programs, missions, and activities that the Mission Directorates have established. The primary mission responsibilities assigned to that Center or to JPL define the work areas for which each Center or JPL is responsible.

Examples (not a complete inventory) of STEM education, diversity and equal opportunity or research and technology development priorities for each of the NASA Offices or Mission Directorates collaborating in this NRA are given below.

Aeronautics Research Mission Directorate (ARMD)

NASA's ARMD works to enhance the state of aeronautics for our nation. ARMD conducts cutting-edge, fundamental research in traditional aeronautical disciplines and emerging fields to help transform our nation's air transportation system, and to support future air and space vehicles. Fostering new generations of highly skilled scientists and engineers is critically important to the aeronautics community.

ARMD is looking for proposals that include themes and content relevant to topics and technologies including:

- **Sustainability**: what is the science involved with making commercial aircraft dramatically more efficient (e.g., reduced fuel use, reduced emissions, reduced noise around airports);
- **Aircraft Design**: where in the design or technologies on an aircraft could things be changed in order to achieve #1 and likely result in an aircraft that looks very different from what we fly in today;
- **Computer Tools**: what new computer-based tools are needed to simulate the performance of future aircraft? How are computers used in the development process and how can we acknowledge the critical role high-end computing plays in transforming aviation? Similar question for additive manufacturing and other converging technologies.
- **X-Planes**: what is the historical role that experimental aircraft have played for NASA and what role will a new series of piloted X-planes proposed by NASA Aeronautics play in transforming aviation? What does it take to design and develop an X-plane?
- **Importance of Aviation**: how does air transportation support the economic health of the United States, and even the world? You may not have flown today but something you needed did.
- **Drones (Unmanned Aircraft Systems)**: what are the technical challenges involved with safely flying small *and* large UAS? What would an air traffic management-type system look like for drones?
ARMD is looking for proposals that also focus on innovative ways to communicate NASA’s contributions to aviation over the years; how and why “NASA is with you when you fly.”

Proposed projects should not duplicate existing aeronautics education products or programs, but may propose to complement, enhance, or extend these activities. For more information about ARMD, proposers are directed to the following websites:

Latest stories about NASA Aeronautics: http://www.nasa.gov/aeronautics
Aeronautics Research Mission Directorate: http://www.nasa.gov/aeroresearch
ARMD education resources: https://www.nasa.gov/aeroresearch/resources

Human Exploration and Operations Mission Directorate (HEOMD)
HEOMD leads and manages NASA space operations related to human exploration in and beyond low Earth orbit. NASA conducts exploration activities in low Earth orbit aboard the International Space Station. Activities supporting exploration beyond low Earth orbit include:
- Operating the International Space Station (ISS), with our international partners
- Developing the Orion spacecraft and the Space Launch System (SLS)
- Managing Commercial Space Transportation development
- Researching and developing Advanced Exploration Systems
- Managing Space Life Sciences Research and Applications
- Managing NASA’s space operations related to Launch Services and Space Communications and Navigation – in support of both human and robotic exploration programs

Proposals whose content encompasses HEOMD should propose activities or programs that are aligned with one or more of the HEOMD programs, research areas, or areas of endeavor listed below.

Focus areas include, but are not limited to:
- Increase public awareness of the marvels associated with ISS, including world-class research/technology advancements and tangible daily benefits to humanity.
- Engage the public in understanding the reasons for exploration in a way that is exciting to young people.
  o Explain the challenges and risks associated with operating at the frontier of research and technology.
  o Show the potential benefits of accepting the risks inherent in operating at the frontier.
  o Articulate this in a manner so that people can understand why we explore despite the challenges.
- Increase public awareness about the future of human space exploration at NASA.
  o Explain why NASA transitioned away from the Space Shuttle Program.
  o Articulate the importance of continued human space exploration.
    ▪ Benefits of exploring further into our solar system with humans;
    ▪ Benefits of each potential destination; and
    ▪ The relationship and synergies between robotic and human space exploration.
- Demonstrate the value of ISS in preparing for long duration missions.
- Demonstrate how Commercial Space Transportation and the Exploration System Development Division (Orion and SLS) are on parallel paths, mutually enabling greater achievements for all parties involved.

HEOMD is particularly interested in projects that provide authentic experiences, including the use and analysis of NASA data from HEOMD missions, use social media, and involve the public in participatory exploration utilizing HEOMD science and engineering content. Proposed projects should not duplicate existing HEOMD education products or programs, but may complement, enhance, or extend these activities.

More information, videos, and images about human space exploration are available at the following websites:

- [http://www.nasa.gov/exploration](http://www.nasa.gov/exploration)
- [http://www.nasa.gov/directorates/heo/home/index.html](http://www.nasa.gov/directorates/heo/home/index.html)
- Detailed information about the benefits of the ISS is available at: [http://www.nasa.gov/missionpages/station/research/benefits/index.html](http://www.nasa.gov/missionpages/station/research/benefits/index.html)

**Science Mission Directorate (SMD)**

The vision of SMD’s STEM Science Activation program is: To share the story, the science, and the adventure of NASA’s scientific explorations of our home planet, the solar system, and the universe beyond, through stimulating and informative activities and experiences created by experts, delivered effectively and efficiently to learners of many backgrounds via proven conduits, thus providing a return on the public’s investment in NASA’s scientific research. Fundamental to achieving this vision is to enable NASA scientists and engineers to engage more effectively with learners of all ages, in any learning environment.

Fundamentally, no important science question stands alone, so NASA science asks these interconnected questions:

- How did the universe begin and evolve, and what will be its destiny?
- What drives variations in the Sun, and how do these changes impact the solar system and drive space weather?
- How did our solar system originate and change over time?
- How and why are Earth’s climate and environment changing?
- How did life originate, and are we alone?

SMD pursues four broad sciences: Planetary, Heliophysics, Earth and Astrophysics. For more information, the website [https://science.nasa.gov](https://science.nasa.gov) explains the how and the why of SMD. SMD is seeking proposals that encompass one or more of SMD’s four broad science themes.

Before proposing, check that the planned project does not duplicate the STEM Science Activation efforts funded by Cooperative Agreement Notice NNH15ZDA004C ([https://nspires.nasaprs.com/external/viewrepositordocument/cmdocumentid=485233/solicitationndl=%7BAC77E7D1-79AD-07F7-28C0-43E5105C5436%7D/viewSolicitationDocument=1/SE%20CAN%2015%20SELECTIONS.pdf](https://nspires.nasaprs.com/external/viewrepositordocument/cmdocumentid=485233/solicitationndl=%7BAC77E7D1-79AD-07F7-28C0-43E5105C5436%7D/viewSolicitationDocument=1/SE%20CAN%2015%20SELECTIONS.pdf))
nor SMD toolkits, citizen science or any infrastructure such as those available at: https://science.nasa.gov/get-involved; http://smdepo.org; or http://solarsystem.nasa.gov/nnw/home.cfm. In addition, review the online resource catalogue for elementary-to-college formal and out-of-school learning in Earth and space science available from www.NASAWavelength.org. If a project proposes to focus entirely on or includes Earth science, suggest connections, if appropriate, to the GLOBE: Global Learning and Observations to Benefit the Environment Program at: https://www.globe.gov.

Finally, projects may propose to partner, complement, enhance, or extend current STEM Science Activation activities. If an SMD-focused project is selected, a potential post-award requirement will be to collaborate with one or more of the existing STEM Science Activation efforts.

Space Technology Mission Directorate (STMD)

The nation’s investments in space technology enable NASA to make a difference in the world around us. The Space Technology Mission Directorate (STMD) is responsible for developing the crosscutting, pioneering, new technologies and capabilities that the agency needs to achieve its current and future missions.

STMD rapidly develops, demonstrates, and infuses revolutionary, high-payoff technologies through transparent, collaborative partnerships, expanding the boundaries of the aerospace enterprise. By investing in bold, broadly applicable, disruptive technology that industry cannot tackle today, STMD seeks to mature the technology required for NASA’s future missions in science and exploration while proving the capabilities and lowering the cost for other government agencies and commercial space activities.

Research and technology development take place within NASA Centers and JPL, in academia and industry, and leverage partnerships with other government agencies and international partners. STMD engages and inspires thousands of technologists and innovators creating a community working on the nation’s toughest challenges.

By pushing the boundaries of technology and innovation, STMD allows NASA and the nation to remain at the cutting edge. STMD:

- Advances broadly applicable, transformational technology to infuse solutions into applications for which there are multiple customers
- Competitively selects research by academia, industry, and the NASA Centers and JPL based on technical merit
- Leverages the technology investments of our international, other government agency, academic and industrial partners
- Coordinates with internal and external stakeholders, including academia, industry and other government agencies
- Results in new inventions, new capabilities and the creation of a pipeline of innovators aimed at serving future national needs
- Grows the nation’s innovation economy and creates high-tech jobs.

Because innovative technology is at the core of NASA’s success and economic competitiveness, Space Technology is interested in cultivating the next generation of inventors, engineers and technologists who will revolutionize space exploration.
The Space Technology Mission Directorate seeks proposals that capture the spirit of pioneering technology development through STEM programs or activities focused on:

- Learning technology designed to raise technology awareness and promote space technology-relevant education;
- After school enrichment or other informal educational opportunities to stimulate interest, awareness and deeper knowledge of space technologies and their impact;
- Hands on learning and interactive environments that promote problem-solving skills and awareness of how technologies make space exploration possible such as: Engineering Design Challenges, Robotics, 3D Printing.

For more information about the Strategic Space Technology Investment Plan, visit https://www.nasa.gov/offices/oct/home/sstip.html.

With technology development at every NASA center and funded projects nationwide, Space Technology is building technical expertise and research and development capabilities that will grow the innovation economy. For more information on Space Technology, visit http://www.nasa.gov/directorates/spacetech/home/index.html#.VO4Nujrnbo.

**OE STEM Education and Accountability Project (SEAP)**

The STEM Education and Accountability Project is the result of NASA’s continuing efforts to streamline and competitively consolidate its STEM education activities, consistent with Congressional and Administration direction. Working in collaboration with other Federal agencies, NASA supports evidence-based, effective, NASA-unique activities that includes Institutional Engagement (IE). IE increases STEM capabilities at formal and informal educational institutions and organizations by incorporating content based on NASA’s missions.

To the extent practical, proposers shall use or repurpose resources, products, and evaluation results from previous CP4SMPVC activities, which can be found at http://informal.jpl.nasa.gov/museum/CP4SMP.

Many NASA Education materials may be found online at: http://www.nasa.gov/audience/foreducators/topnav/materials/A-Z_Pubs.html.

**Note:** This NRA does not seek proposals designed to primarily advance formal education, such as but not limited to, providing scholarships or tuition to high school or college students or sabbatical pay for higher education faculty or formal certificate attainment.

To implement SEAP’s priorities for FY 2015 and beyond, this NRA seeks to competitively select projects aligned to the following NASA Education Lines of Business:

**Institutional Engagement (IE)** increases STEM capabilities at formal and informal educational institutions and organizations by incorporating content based on NASA’s missions. The CP4SMPVC NRA is a primarily an Institutional Engagement activity. IE also enables informal institutions, such as museums, planetaria, and science centers, to engage their visitors through exhibits and displays that showcase NASA’s dynamic content. Institutional Engagement seeks to:

- Build Capacity: Support interactions between NASA Centers/JPL, educational institutions and organizations to enhance their competitiveness to perform STEM
research and development, enable their ability to deliver and participate in NASA-based activities, and expand their participation in STEM education reform at the federal, state and local levels.

- Deliver Content: Increase the STEM capacity of institutions and organizations to contribute to the NASA mission through research, curriculum development and instruction, delivery of content, and/or enabling capabilities.
- Ensure Institutional Diversity: Promote diverse representation of institutions and organizations affiliated with NASA.
- Sustain Capacity: Improve the ability of NASA-supported institutions and organizations to sustain their developed capacity in STEM personnel, programs, and infrastructure beyond NASA funding.
- Encourage Networks and Communities: Facilitate a process where like-minded educational institutions and organizations can utilize the NASA networks of grantees, collaborators, and alliances with the intent of building a community of practice to help sustain their STEM capacity.

**STEM Engagement** provides opportunities for participatory and experiential learning activities in formal and informal education settings to connect learners to NASA-unique resources. The priority for STEM Engagement for this solicitation is on projects that provide an “authentic STEM experience” in the areas of STEM Experiential Learning Opportunities and STEM Challenges.

- STEM Experiential Learning Opportunities enable learners to acquire knowledge, understand what they have learned, and apply that knowledge through inquiry-based and project-based activities. NASA opportunities include participatory activities designed to increase involvement, knowledge, understanding/comprehension, and application of learning in one or more STEM disciplines using our unique resources.
- STEM Challenges are creative applications of NASA-related science, technology, engineering, mathematics, and cross-cutting concepts. They challenge existing assumptions and encourage learners to demonstrate their knowledge of STEM subjects while enhancing innovation, critical thinking, and problem-solving skills. The Agency actively communicates with learners at all levels of the learning complexity scale through these Challenges.

**Educator Professional Development (EPD)** uses NASA’s missions, education resources, and unique facilities to provide high-quality STEM content and hands-on learning experiences to in-service, pre-service and informal educators. EPD provides educators with the knowledge, skills, and ability to deliver unique STEM content to learners who will ensure the economic growth and competitiveness of our nation.

To reach the educators described, NASA’s EPD prioritizes these types of activities:

- Face to Face (F2F) workshops, for pre-service and in-service teachers, at grade-appropriate levels based on specific audiences, for a minimum of 40 contact hours. Workshops should use Mission Directorate content and emphasize current missions.
- Online EPD to support and enhance other priorities to reach diverse geographical, gender, and socioeconomic audiences to increase educator participation serving underserved/underrepresented student populations. Online EPD includes designing, planning and implementing online learning opportunities for educators that encompass a
wide range of technologies and approaches that allow participants to go beyond limitations imposed by real-time, in-person EPD. Characteristics of an Online EPD are synchronous and asynchronous virtual learning opportunities that enhance and extend the breadth, depth, and reach of NASA’s EPD training, content, and resources, utilizing a variety of electronic delivery tools.

2. Communications and Diversity Priorities

Office of Communications
At NASA, sharing information is a mandate within our founding legislation. Throughout our history, it has been a priority to make data from science missions, research, and other discoveries available for the benefit of the nation. The OC is responsible for finding ways to inform and directly engage the public in the work NASA is doing through a range of activities and methods, including media relations, multimedia products, social media, the web, special events, exhibits, speakers, strategic partnerships, and the NASA History Office. An American public that is knowledgeable and interested in science, aeronautics, and exploration will value the impact of advances in these fields that help maintain global competitiveness and a robust economy. Opening pathways for the public to actively participate in NASA’s activities is a new focus consistent with the philosophy of government transparency. OC seeks to include the general public in the adventure and excitement of our activities and tap into individual creativity and capabilities to enhance the public’s understanding and interest in science, discovery, and exploration. The OC is most interested in proposals that explore new tools, techniques and capabilities to reach the public and engage their interest, especially mechanisms through which the public can directly and specifically contribute to our missions. Of special interest are innovative proposals that encourage sustained engagement with NASA.

NASA websites host a wealth of mission and program information, and specific program and project information through information-sharing portals. Start your exploration at http://www.nasa.gov.

Office of Diversity and Equal Opportunity (ODEO)
NASA has awarded, and currently manages, approximately $1 billion in grants to traditional and non-traditional education institutions across the country, including universities and museums. With this money comes the responsibility of ensuring all program beneficiaries, including students, faculty, administrative staff, and visitors to science centers and museums, have an equal opportunity (EO) to participate and succeed in these federally funded programs, regardless of gender, race, age, ethnicity or disability. The NASA Office of Diversity and Equal Opportunity (ODEO) is responsible for advancing EO and diversity and inclusion (D&I) among the NASA workforce and our grantee institutions, including universities and colleges, museums, planetariums, science centers and space camps nationwide that benefit from NASA dollars. In turn, these recipients provide year-round cultural and informal educational opportunities for their communities and for visitors traveling nationally and internationally. NASA communicates its support for EO and diversity through a multi-pronged approach, consistent with our strategic objective to: “Attract and advance a highly skilled, competent, and diverse workforce, cultivate an innovative work environment, and provide the facilities, tools, and services needed to conduct NASA’s missions.” For example, the Agency supports diversity in STEM through its participation in annual commemorations such as Black History Month, Hispanic Heritage
Month, Women’s History Month, and more. The Agency also reaches out to underserved/underrepresented groups in STEM though its many education programs, including the Minority University Research and Education Program. In addition, there is NASA ODEO’s MissionSTEM website (https://missionstem.nasa.gov/index.html), which is designed to offer the Agency’s grantees and their beneficiaries comprehensive information on complying with EO laws and diverse and advancing diversity efforts. For example, the site contains videos of NASA scientists and technologists working on many different kinds of STEM activities the Agency does that benefit society (see the NASA Innovations Impact the World page at: https://missionstem.nasa.gov/innovations/index.html). These are appropriate topics for proposals as long as there is a focus on at least one NASA Mission priority—not general STEM. For complete and current information visit: http://odeo.hq.nasa.gov/policy.html.
APPENDIX B. Authentic STEM Experience Framework

**Definition:** An Authentic STEM Experience (ASE) is an experience inside or outside of school designed to engage learners directly or indirectly with practitioners and in developmentally-appropriate practices from the STEM disciplines that promote real-world understanding.

### Context:
- **Authentic STEM Experience** = the acronym STEM addresses the disciplines of Science, Technology, Engineering and Mathematics. Each discipline, and even within each discipline, has a distinct focus and methodology.
- **is an experience** = can be designed or impromptu
- **inside or outside of school** = any environment is a possible ASE location
- **designed to engage learners** = interaction and active doing, when possible
- **directly or indirectly** = the interaction is not always face-to-face
- **with practitioners** = which includes teammates and/or experts/practitioners of any of the STEM disciplines
- **and in developmentally-appropriate** = the ASE will be designed to be age/skills appropriate
- **practices from the STEM disciplines** = each discipline, and even within each discipline, has an identified process methodology which should be included in the experience
- **that promote real-world understanding** = the experience should provide a realization of how the discipline is used in actual activities applicable to current or future issues, problems and associated potential solutions

### ASE Characteristics:
- **Active-Doing:** Directly engages in actions that model the distinctive practices of the STEM disciplines.
- **Collaborative:** Interacts/shares with a team and/or a practitioner/subject matter expert in the STEM disciplines.
- **Meet learners where they are:** Developmentally and culturally appropriate learning experiences that illustrate or demonstrate the topic’s relevancy to the learners.
- **Appropriate learning approach/practice:** Applies relevant disciplinary methodology(ies)/practices.
- **Real-World Understanding:** Connects applied and/or theoretical aspects of the STEM disciplines to the learner’s world.
APPENDIX C. References to Relevant Web Addresses

(Note: If a link does not load, try another browser or copy the title and plug it into your browser’s search window. This is often needed for pdf files.) This list is provided for the proposers’ convenience only. To the extent that non-NASA sites are provided in the listing below, NASA does not endorse or approve of the content contained in those sites.

**Research & Evaluation – Informal Science Education**

- Common Guidelines for Education Research and Development: A Report from the Institute of Education Sciences, U.S. Department of Education and the National Science Foundation, August 2013

- Designing Evaluations, Government Accountability Office, 2012

- Framework for Evaluating Impacts of Broadening Participation Projects - Report from a National Science Foundation Workshop

- Principal Investigator’s Guide: Managing Evaluation in Informal STEM Education Projects

- Surrounded by Science: Learning Science in Informal Environments
  [http://www.nap.edu/catalog.php?recordid=12614 (read online or download free pdf)](http://www.nap.edu/catalog.php?recordid=12614 (read online or download free pdf))

- What Works Clearinghouse
APPENDIX D. Identification of Entities as NASA Visitor Centers Special Guidance: STEM Education Activities and NASA Visitor Centers

The purpose of this section is to define the only entities eligible to identify themselves as a NASA Visitor Center (VC) on the Program Specific Data sheet required by this NRA. As of the issuance date of the NRA, NASA has not issued a policy directive or policy requirement or separate rules under the Code of Federal Regulations (CFR) to establish common visitor center criteria. If any CFR or NPD is issued following the publication of this NRA, it will apply.

For the purposes of this NRA there are nine NASA Centers excluding JPL. The following institutions may identify as a NASA Visitor Center on the Program Specific Data Form:

- **Ames Research Center (ARC)** – NASA Ames Exploration Center, an Ames Facility. [http://www.nasa.gov/centers/ames/home/exploration.html](http://www.nasa.gov/centers/ames/home/exploration.html)
- **Armstrong Flight Research Center (AFRC)** – In addition to the inside-the-gate federal VC, ARFC has a proxy-VC called the Aero Institute in Palmdale, CA, that is not located on NASA property and is not a NASA facility and may submit a cooperative agreement proposal as AFRC’s proxy VC if that is AFRC’s preference expressed in a letter of commitment from AFRC. [http://www.nasa.gov/centers/dryden/education/erc_visitors_center_reopens.html](http://www.nasa.gov/centers/dryden/education/erc_visitors_center_reopens.html) [http://aeroi.org/](http://aeroi.org/)
- **Langley Research Center (LaRC)** – LaRC’s VC is the Virginia Air and Space Center, which is a 501(c)(3), not a NASA facility or located on NASA property. [http://www.vasc.org/](http://www.vasc.org/) Virginia Air and Space Center (not LaRC) is eligible to apply as the designated VC.
- **Goddard Space Flight Center includes Wallops Island Visitors Center (GSFC)** – Both are NASA facilities and located on NASA property and are eligible to submit a proposal. GSFC VCs have two home pages. [http://www.nasa.gov/centers/goddard/visitor/home/index.html](http://www.nasa.gov/centers/goddard/visitor/home/index.html) [http://sites.wff.nasa.gov/vc/](http://sites.wff.nasa.gov/vc/)
- **Glenn Research Center (GRC)** – Existing VC partner is Great Lakes Science Center (GLSC) established by a Space Act Agreement signed by GRC. GLSC is a 501(c)(3) that is not a NASA facility or located on NASA Property. [http://www.greatscience.com/](http://www.greatscience.com/) GLSC (not GRC itself) is eligible to apply as the designated VC.
- **Stennis Space Center (SSC)** – Existing VC partner is Infinity Science Center at NASA Stennis Space Center, a private 501(c)(3) that is located on NASA property and established as the VC under the Space Act. [http://www.visitinfinity.com/](http://www.visitinfinity.com/) Infinity (not SSC itself) is eligible to apply as the designated VC.
- **Marshall Space Flight Center (MSFC)** – Existing Partner is the U.S. Space & Rocket Center (USSRC), a state of Alabama-owned entity that is not a NASA facility or located on NASA property. [http://rocketcenter.com/](http://rocketcenter.com/) USSRC (not MSFC itself) is eligible to apply as the designated VC.
- Johnson Space Center (JSC) – Existing Partner is Space Center Houston (SCH), a private 501(c)(3) facility on NASA property established under the Space Act. [http://www.spacecenter.org/](http://www.spacecenter.org/)
  SCH (not JSC itself) is eligible to apply as the designated VC.
- Kennedy Space Center (KSC) – Existing Partner Kennedy Space Center Visitor Complex (KSCVC) has operated for more than 43 years as a concession activity. As such, no appropriated dollars are received for its development, operation or maintenance. All revenues are generated through the sale of admission, food, retail and education programs without cost to the federal budget. (Source: [http://www.nasa.gov/centers/kennedy/news/releases/2010/release-20100212c.html](http://www.nasa.gov/centers/kennedy/news/releases/2010/release-20100212c.html).) [http://www.kennedyspacecenter.com/](http://www.kennedyspacecenter.com/)
  KSCVC (not KSC itself) is eligible to apply as the designated VC.

**Federal, Non-Concessionary NASA Visitor Centers: Limitation on Funds and Principal Investigator Status**

While Federal agencies are not solicited by this NRA, at the time of issuance of this NRA, ARC, AFRC and GSFC represent a total of four federal NASA VCs. NASA’s federal VCs operated by these NASA Centers GSFC, ARC, and AFRC are listed in this appendix and are eligible to directly apply to this NRA via its sponsoring Center. Any funds provided to these federal NASA VCs are to be obligated and costed in the fiscal year of award, or, if appropriated as two-year funds, in the following fiscal year unless the submitted proposal includes a detailed subaward to a non-federal third party.

A NASA employee who is a director, manager, or leader for a federal NASA VC shall not request salary support in the proposal. Salary support for a contract employee directing a federal NASA VC is capped at 50% of their salary; requests for salary support are strongly discouraged. If any federal VC, manager contract or NASA employee, is not available or has not been designated by a Center, then the NASA employee who represents ARC, AFRC or GSFC on NASA’s Communications Coordinating Council or CCC may submit the proposal as the PI. Again, no salary support for NASA employees shall be requested. A Center’s member to the NASA Education Coordinating Council may substitute for a CCC member if that appointment is made in writing by the Center Director and is documented in the proposal.

**Peer Review of NASA Visitor Center Proposals under CP4SMPVC**

VC proposals will be reviewed first by JPL and then by a NASA Headquarters employee or the NRA Selecting Official for compliance with the NRA. If found compliant, the proposals will be reviewed by experts external to NASA along with proposals submitted by eligible IEIs, and then by NASA experts as described in Section 6. Proposal Evaluation and Selection.
APPENDIX E. Principal Investigator Criteria Details

Because CP4SMPVC limits submissions to one lead proposal per institution, NASA expects each IEI’s senior executive to serve as PI in an appropriate, albeit sometimes limited, capacity for proposal development and to negotiate any subsequent award. NASA does not expect such PIs to perform daily management of a funded project unless appropriate to the proposed project. A proposal may designate another individual as the project’s team leader or co-investigator (Co-I) to manage implementation.

Only senior executives for an entire organization have the signatory authority necessary to commit intellectual and financial resources to CP4SMPVC projects. A senior executive with authority to commit financial assets is qualified to monitor a NASA grant’s reporting requirements, particularly as being able to attest to the fiscal health and stability of the proposing organization’s support. Given the limited funding available in the current economic environment, the PI and the AOR shall certify as to the financial health of the proposing organization to carry out the proposed project at the time of selection. PIs shall meet all of the following criteria at the time the proposal is submitted:

1) Be an employee (this includes individuals serving on a contract or as volunteers on an unpaid basis) of the eligible applicant institution;

2) Be the President, Vice President, Chief Executive Officer, Chief Financial Officer, Chairman of the Board, Superintendent of Schools or similarly ranking executive from the eligible institution (e.g. Planetarium Director, Director of Sponsored Research) who can commit the institution’s intellectual and physical assets to the proposed project.

3) Have oversight for the fiscal health or fitness of the applicant organization or institution, such as but not limited to: responsibility for ensuring the organization has had a recent and appropriate audit, and can answer questions about the organization’s accounting and timekeeping systems.

This requirement will remain in place for the period of performance for any award.

Note: If a particular contribution of a partnering institution, including any NASA Center, is essential to the performance of the proposed project, then a letter of commitment outlining and confirming that commitment, signed by a management official authorized to commit that institution, shall be submitted with the proposal’s required forms and certificates. Each commitment letter shall refer to the NRA, and indicate agreement with the nature of the collaboration and state the specific resources being committed.
APPENDIX F. Sample - Special Language And / Or Requirements for CP4SMPVC Awards

I. General Cooperation with NASA, NASA Partners or Affiliates, other Federal Agencies or Federally-funded projects

A) Awarded projects are expected to cooperate or coordinate with:

1. The Museum Alliance (MA) convened by JPL (both the public site and the awardees’ Community of Practice site). Register at no cost at https://informal.jpl.nasa.gov/museum/Joining/(more information is given below).
2. A limited number (not to exceed 12 unless the project was designed to work with more) of federal and non-federal NASA Visitor Centers and NASA Educator Resource Centers.
3. Past, current and future awardees to ensure no unnecessary duplication (see list and abstracts at https://informal.jpl.nasa.gov/museum/CP4SMP/Program)
4. Any NASA-contracted or -funded internal or third-party, national-level monitoring and evaluation efforts.
5. If developing exhibits, the project should join Exhibit Files, a community site for exhibit designers and developers at: http://www.exhibitfiles.org/ [funded by the National Science Foundation (NSF)].
6. Disseminate Evaluation Reports. If not self-published by the project itself or through a journal or other publisher, submit reports to http://www.InformalScience.org, an online community that strives to support knowledge-sharing, collaboration and the growth of innovation among diverse professionals in the field of informal science education (also funded in part by NSF). NASA may also or alternatively post on the CP4 section of the Museum Alliance site, if submitted in NASA-508 compliant format.
7. Respond to requests that cannot be anticipated at this time from NASA or JPL that are related to Administration calls or Congressional queries.

B) Reverse Site Visit

Awarded projects represented by Principal Investigator (PI) or by other key personnel shall participate in at minimum a two-day awardee meeting held approximately annually. If subject matter for the meeting warrants it, the meeting may be longer than two days and involve coordination with other Federal funding agencies or non-profit partners.
II. **Annual, Interim and Final Project Reporting to NASA**

A) Awarded projects are required to submit annual and final project reports using the Preferred Education Project Report Format as outlined below. Interim reports may be submitted as necessary or as requested by NASA. (Note: Work is underway to streamline data entry for the various awardee reporting standards, including a spreadsheet of the following information required in Progress Reports.)

Project Reports are a comprehensive summary of significant accomplishments during the reporting period or the duration of the grant. Progress Reports, Final Reports and interim Educational Activity Reports ideally include the following information in the following order to facilitate cross project analysis and reporting:

1. NASA Grant Number and Title of the grant.

2. Type of report (Progress, Final or Interim).

3. Name(s) of the principal investigator and other key project personnel with institutional contact information (e-mail and phone).

4. Period covered by the report. (From: month/day/year to: month/day/year)

5. An updated project abstract (not to exceed 500 words). Please include the goal(s) of the project and your estimate of whether/when those goals have been/will be achieved.

6. List deliverables or products being prepared or already developed (for example but not limited to: outreach materials/exhibits/film and other media/URLs etc.) that will lead to the accomplishment of the project’s goals, impacts, or outcomes. Please briefly describe each deliverable in enough detail to allow report of intended or unintended effects.

7. Identify types of target audience(s) under two broad categories: 1) Public and 2) Professional and provide target and actual (if available) participation numbers. Identify the most important intended audience impacts (up to three). For each audience impact, indicate how you (will) measure or assess that impact or for defining overall success.

8. A Project or (if applicable) any Product Evaluation Update: Indicate (Yes or No) whether or when the project engaged in 1) third-party and/or 2) self-assessment activities. This includes internal or external evaluators or peer or scientific reviewer components. If the answer is “No” or not applicable, please indicate why no evaluation was conducted or is planned. If the answer is “Yes”, please briefly explain by:

   a) Listing approaches, data collection techniques, and/or modes of analysis used to demonstrate impact, such as:
      - Project administrative records
      - Pre/post test of participants’ skills, knowledge, or attitudes
- Telephone survey
- Mail survey
- Formal interviews, in person
- Formal interviews, by telephone
- Unstructured interviews with participants
- Observation
- Focus groups
- Formal education system data
- Count of attendance, participation, or use
- Other (did you have a target or treatment audience and a control group?)

b) Indicate if documents, such as an evaluation plan or formative evaluation reports, data sets, etc., exist and contact information for obtaining these materials and whether they are publicly available.*

c) What continuing impact is this project/product likely to have?

(9) Problems Encountered and Other Information.
(10) Dissemination Accomplishments/Plans.

*NOTE: NASA Education requests that the annual report include a brief summary of the project’s evaluation status and include the web address (URL) of publicly posted evaluation reports related to the project.

B) Detail Annual Project Activity Report

Awardees are asked to submit a completed Detail Project Activity Report in for quarterly or semi-annual U.S. Government fiscal year reporting (Oct. – Dec., Jan. – Mar., Apr. – Jun.) as requested by the CP4SMPVC management team, to facilitate awardee reporting to NASA’s Office of Education Performance Management (OEPM) System. A summary Detail Project Activity Report should also be submitted in conjunction with an awardee’s Final Report. The Detail Project Activity Report spreadsheet template is provided by the JPL management team for the awardees to record both their quantitative and select qualitative data. NASA records annual outputs, outcomes and the tracking of participants or beneficiaries reported by awardees through OEPM, which allows NASA’s Office of Education to collect and report stakeholder data and feedback to the Administration and Congress.

C) Evaluation Logic Model

In conjunction with each Annual and Final Education Report, awardees shall file an updated logic model for your project, which also shows how it supports the investment priorities in the NASA Strategic Plan, and NASA Education Strategic Plan 2015-2017 (see Section VIII of this document).

D) Report Submission
Your Annual Reports, Final Report, Detail Project Activity Reports, Logic Model, and/or interim reports should be sent electronically to the following, with your Award Number in the subject line of the email.

To: nssc-grant-report@nasa.gov
Cc: Your Technical Officer’s email
Cc: cp4smp@jpl.nasa.gov

III. Awardee Acknowledgement of NASA Funding

An important way that NASA makes information available to the public in a transparent and meaningful manner is to ask awardees to acknowledge NASA funding. All information produced and disseminated by an awardee should contain a statement that acknowledges NASA's support and identifies the award by number (see example in Section IV-A below.)

For example:

"This website (or production label) is based upon work supported by NASA under award No(s) <insert number(s)>.”

All awardee communications that cite the NASA award number in any medium (including the exposition of results from NASA supported research), except for articles or papers published in scientific, technical, or professional journals, shall also use the following disclaimer:

“Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration.”

If available, please indicate a URL. If your project does not have or need a URL, please consider alternative distribution sites to demonstrate the impact of the project, such as http://www.InformalScience.org, articles for journals, and presentations at national conferences such as the Association of Science-Technology Centers (ASTC); American Evaluation Association, etc.

IV. Review and Use by NASA of Awardees’ Education Products or Communications Materials

A) Should any book, article, show, educational software, or any other product or media result from the award, the following guidance is applicable in accordance with the Rights in Data term and condition (2 CFR Part 1800.909). The Recipient grants to the Federal Government, a royalty-free, nonexclusive and irrevocable license to use, reproduce, distribute (including distribution by transmission) to the public, perform publicly, prepare derivative works, and display publicly, data in whole or in part and in any manner for Federal purposes and to have or permit others to do so for Federal purposes only. The following government funding/rights statement, as well as the
statement required by the Technical Publications and Results term and condition (paragraph (a)(2) of 2 CFR Part 1800.902), should be placed on the product’s information page (page that contains the Recipient’s copyright notice):

This <product type> was developed/authored-edited by employees/contractors of the “Recipient’s Name” under Grant [or Cooperative Agreement] No. NNX#### with the National Aeronautics and Space Administration. The United States Government has a royalty-free, nonexclusive, irrevocable, worldwide license to use, reproduce, distribute, and prepare derivative works of this <product type>, and to have or permit others to do so for United States Government purposes. All other rights are retained by the copyright owner.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration.

The following statements shall be used on documentation (including a website or webpage talking about the award) resulting from an award in accordance with the directions of 2 CFR Part 1800.902 (a)(1) through (a)(3) – Technical Publications and Reports).

The material contained in this <document or product> is based upon work supported by NASA under award Number NNX####.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration.

Should any NASA data, imagery, photographs, illustrations, figures, and/or animation, be used in the preparation of any publication (pdf document or website), the following credit should also be used on the documentation:

Photograph <or illustration, figure, etc.> courtesy of NASA <or NASA Center managing the mission or program> and the <Principal Investigator's institution>.

Additionally, awardees making planetarium shows or other visual media will supply upon NASA’s request in the proper format at no cost to NASA copies of the shows for all NASA visitor centers and NASA TV.

B) Periodically, the HQ-JPL management team will request from the awardee updates to product and project descriptions, which will be used to represent the awardee’s current work to the community and to the public, including posting on the Awardees website on the Museum Alliance and informalscience.org.
NASA education also expects awardees will contribute to a community of practice for NASA informal education and to permit NASA use (including posting on the NASA website) of selected products developed under a grant or cooperative agreement. You may not use the NASA logo on your website without permission from NASA (see Section V below).

V. Use of NASA Insignia/Communications Materials Style Guide

Any proposed use of the NASA Insignia in any document developed by the Award Recipient, including use on an “Our Supporters/Funders/Projects” page, needs to be approved by NASA Public Affairs Office at Headquarters in Washington, DC.

Additionally, please note that use of the NASA insignia on a website is not appropriate without the required statements noted above (in accordance with 2 CFR Part 1800.902(a) (1) thru (3)).

Procedures for Recipient Requests for NASA Prior Approval of Authorized Uses of the NASA Seal, NASA Insignia, NASA Logotype, NASA Program Identifiers, or NASA Flags (Ref. 14 CFR § 1221.1)

Recipients of NASA grants and cooperative agreements having a need, desire, or purpose for an authorized use of the NASA insignia, NASA seal, NASA logo, NASA program identifiers, or NASA flags in connection with their award, shall request and obtain prior written approval from the designated NASA grant officer, in conjunction with the NASA Headquarters, Office of Communications, POC: Bert Ulrich, Telephone: (202) 358-1713, Email: bert.ulrich@nasa.gov. When you email Mr. Ulrich, be sure to copy your Technical Officer and Bev Girten beverly.e.girten@nasa.gov, the Institutional Engagement Line of Business manager at NASA Headquarters Office of Education.

If prior written approval is granted by NASA, the authorized use of the NASA device by the recipient shall be accompanied by the following notice to be included on grant- or cooperative agreement-related materials:

“This material is based upon work supported by NASA under grant or cooperative agreement award number NNX______.
Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration (NASA).”

Additional guidance:

☐ When authorized by NASA, the recipient’s use of the NASA insignia shall appear against a solid white, black, silver, or gray background.
☐ The NASA insignia shall not appear next to other logos as this might imply an endorsement by the Agency.
Link to Office of the General Counsel Webpage: 
http://www.nasa.gov/offices/ogc/ip/logo.html

Additional guidance can be found regarding use of the NASA Logo and other material at the following URL: 

NOTE: Not all materials produced by the award will qualify as educational products; however, some products will be valuable to NASA for use in public outreach. For outreach materials, NASA has a NASA Graphics Standards Manual (currently known as the NASA Style Guide) that details unifying elements, such as key messages and design standards, in all NASA-funded communications material distributed by NASA. The use of the style guide enables consistency throughout the Agency of the abovementioned elements. The goal is to enhance the effectiveness and efficiency of NASA communications.

NASA-funded communications material covered by the NASA Style Guide includes, but is not limited to, newsletters, posters, bookmarks, brochures, flyers, handouts, customized stationery products, DVD/CD packaging, exhibits, signage, and other printed design and artwork. Exempt from Style Guide guidelines are:

(i) Material subject to 14 CFR Part 1213, Release of Information to News and Information Media, such as press releases, media advisories, and NASA television video files
(ii) Technical and scientific papers subject to NPD 2200.1, Management of NASA Scientific and Technical Information, and
(iii) Presentations including one-off poster sessions. Also exempt are all normal and routine business or intra-agency correspondence, electronic mail, litigation materials, directives, regulations, etc., which do not affect a significant NASA audience or does not contain information of general NASA interest.

Please work with your NASA Technical Officer at the Field Centers (not the NSSC) about the use of the NASA Style Guide when you have materials you would like to clear through NASA.

VI. Technical Expertise Available from NASA for the Review of Products

We are living in changing times, so you should contact NASA subject matter experts very early during product design to ensure there is no conflict with NASA and that you are using the most current NASA content. Please copy cp4smp@jpl.nasa.gov when you initially contact any of the following experts:

NASA Earth & Space Science Education Product Review
The NASA Science Mission Directorate (SMD) sponsors independent peer reviews of SMD- funded education materials and also accepts requests from NASA education awardees associated with SMD including you. The purpose of these reviews is to ensure
that education products distributed by NASA are of high quality and meet rigorous standards, as well as to provide feedback to product developers from educators and scientists. The Institute for Global Environmental Strategies (IGES) - a non-profit education organization - conducts the reviews for NASA. Products are included for both formal (elementary-college) and informal education.

For more information, please visit:

**Aeronautics Research Mission Directorate (ARMD)**
If you plan to produce products or materials related to the Aeronautics Research Mission Directorate (ARMD), at least 6 months prior to final production for content review contact:

Karen Rugg  
Education Liaison  
NASA Headquarters  
Phone: (202) 358-2197  
Karen.L.Rugg@nasa.gov

**Human Exploration and Operations Mission Directorate (HEOMD)**
If you plan to produce products or materials related to the Human Exploration and Operations Mission Directorate, at least 6 months prior to final production for content review contact:

Elsie Weigel  
Human Exploration and Operations Mission Directorate  
Public Outreach  
NASA Headquarters  
Phone: (202) 358-2345  
Elsie.Weigel@nasa.gov

**Space Technology Mission Directorate**
If you plan to produce products or materials related to NASA space technologies, at least 6 months prior to final production for content review contact:

Diego Rodriguez  
Space Technology Mission Directorate  
Education Lead  
NASA Headquarters  
Phone: (202) 358-1943  
Diego.F.Rodriguez@nasa.gov
VII. Technical Support from the Museum Alliance and How and When to Report to the Museum Alliance

The Museum Alliance is a community of practice. Partners communicate frequently through list servs and regular telecons. The telecons allow you to ask questions directly about NASA processes, mission events, etc. If you have NASA-related questions we can’t answer, we’ll try to find someone who can. The Museum Alliance is meant to be the front-door to NASA content and experts.

To fulfill reporting standards and annual performance goals levied on the Museum Alliance, all awardees shall enter their current, on-going, and future NASA-related events, programs, and other activities via the Museum Alliance website (https://informal.jpl.nasa.gov/museum/Advertise) whether or not these are specifically funded by the award. These entries will be listed on the Museum Alliance’s public list of NASA-related events, programs, etc., at https://informal.jpl.nasa.gov/museum/Visit. Awardee efforts will be highlighted on the Museum Alliance website at http://informal.jpl.nasa.gov/museum, and awardees are encouraged to submit shareable products for posting on the Museum Alliance website (submit to cp4smp@nasa.gov). (Note: work is underway to streamline awardee reporting standards, and will coordinate with entries made to the Museum Alliance events list.)

Please plan to use the NASA media release form at your events, so that photos with identifiable adults and youth in them may be used if needed for NASA budget requests by Headquarters+ and Museum Alliance websites, and other forms of publication. Images and videos uploaded should include a NASA media release form.

When available and appropriate, NASA records annual outputs, outcomes and the tracking of participants or beneficiaries reported by awardees through the NASA Office of Education Performance Management (OEPM) System. OEPM allows NASA’s Office of Education to collect and report stakeholder data and feedback to Office of Management and Budget (OMB) and Congress. The MA assists NASA managers with reporting and analysis of award data to OMB. JPL will provide suggested templates for the collection of quantitative and selected qualitative data for such reporting when appropriate and available using the Museum Alliance.

VIII. Communication of Project Results and Evaluation Methods

NASA Education investments at the Agency-level document their intended outcomes and use metrics to demonstrate progress toward and achievement of these outcomes and of annual performance indicators. Your award and its outputs, outcomes, and impact rolls up into that reporting.

Awards are required to use affordable evaluation methodology based on reputable models and techniques appropriate to the content and scale of the targeted activity, product, or
program, in accordance with the evaluation requirements as outlined in the Announcement of Opportunity to which the proposal was submitted.

Of particular importance is a 2008 report on a workshop held on evaluating impacts of federally funded informal science education projects under the ACC. Details are at: http://informalscience.org/documents/Eval_Framework.pdf.

IX. NASA Safety Policy / Mishaps and Close Call Reporting Associated with Award Funding

All awards shall take into consideration NASA’s priority emphasis on safety.

Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA’s safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including employees working under NASA award instruments), and (4) high-value equipment and property.

Awardees should have a written safety policy and notify the NSSC of any mishaps and close calls related to award implementation within 10 business days of the close call or mishap. The following NASA procedural requirement applies to NASA entities and may be useful to non-NASA entities for benchmarking purposes:

Responsible Office: Office of Safety and Mission Assurance
https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PR_8621_001C_&page_name=Chapter5

For additional information on the NASA Safety and Mission Assurance Program see: https://sma.nasa.gov/.

X. Relevant Web Addresses /References


The NASA Education Implementation Plan

NASA Educator Resource Centers (ERCs)
http://www.nasa.gov/offices/education/programs/national/ercn/home/-_UqJjkBYU1ZE

NASA Museum Alliance http://informal.jpl.nasa.gov/museum
Informal Science Education (ISE) Professionals Resource http://www.informalscience.org

NASA Grant and Cooperative Agreement Handbook
https://prod.nais.nasa.gov/pub/pub_library/srba/index.html


NASA Visitor Centers (A Common Non-NASA Gateway or Portal) http://www.visitnasa.com

Dryden Research Center (DRFC)—Existing partner is a proxy-VC called the Aero Institute in Palmdale, CA, which is not located on NASA property and is not a NASA facility and may submit a cooperative agreement proposal as ARC’s Designated VC if that is Dryden’s preference. Source:
http://www.nasa.gov/centers/dryden/education/erc_visitors_center_reopens.html
http://aeroi.org/

Ames Research Center (ARC)—NASA Ames Exploration Center, an Ames Facility. Ames also has a cooperative agreement with the Aero Institute to support Education and Engagement activities. http://www.nasa.gov/centers/ames/home/exploration.html.

Langley Research Center (LaRC)—Existing VC partner is Virginia Air and Space Center, which is a 501(c)(3), not a NASA facility or located on NASA property. http://www.vasc.org/.

Goddard Space Flight Center includes Wallops Island Visitors Center (GSFC)—Both are NASA facilities and located on NASA property. GSFC VCs have two home pages: http://www.nasa.gov/centers/goddard/visitor/home/index.html
http://sites.wff.nasa.gov/vc/
GSFC also has a space act agreement with the nonprofit organization Maryland Science, Exploration, and Education Center (SEEC). (No URL available)

Glenn Research Center (GRC) --Existing VC partner is Great Lakes Science Center (GLSC) established by a Space Act Agreement signed by GRC. GLSC is a 501(c)(3) that is not a NASA facility or located on NASA Property. http://www.greatscience.com/.

Stennis Space Center (SSC) –Existing VC partner is Infinity Science Center at NASA Stennis Space Center, a private 501(c)(3) that is located on NASA property and established as the Visitor Center under the Space Act. http://www.visitinfinity.com/.
Marshall Space Flight Center (MSFC)—Existing Partner is the U.S. Space & Rocket Center or USSRC, a state of Alabama-owned entity that is not a NASA facility or located on NASA property. [http://rocketcenter.com/](http://rocketcenter.com/).

Johnson Space Center (JSC) --Existing Partner is Space Center Houston or SCH, a private 501(c)(3) facility on NASA property established under the Space Act. [http://www.spacecenter.org/](http://www.spacecenter.org/).

Kennedy Space Center (KSC)—Existing Partner Kennedy Space Center Visitor Complex (KSCVC) has operated for more than 43 years as a concession activity. As such, no appropriated dollars are received for its development, operation or maintenance. All revenues are generated through the sale of admission, food, retail and education programs without cost to the federal budget. Source: [http://www.nasa.gov/centers/kennedy/news/releases/2010/release-20100212c.html](http://www.nasa.gov/centers/kennedy/news/releases/2010/release-20100212c.html) [http://www.kennedyspacecenter.com/](http://www.kennedyspacecenter.com/)

NASA Shared Services Center (NSSC) Technical Assistance to Grantees. [https://www.nssc.nasa.gov/](https://www.nssc.nasa.gov/)
APPENDIX G. CP4SMPVC Program Specific Data Form

Announcement Number: NNH17ZHA002N

Each proposer (including those using Grants.gov) shall complete one Program Specific Data (or PSD) questionnaire. WARNING: Grants.gov does not have this PSD template. Grants.gov submitters should include the PSD response immediately before the proposal’s Table of Contents.

The NSPIRES questionnaire template does not provide unlimited text to ask or answer the questions/items. The purpose of this appendix is to give a preview of the requested items. Additionally, the use of bullets in questions or answers is not permitted within NSPIRES; for example, for readability purposes bullets are used below and will not be visible in NSPIRES. It is also possible that there will be minor inconsistencies (e.g. punctuation, italics) between the following text and what is provided in NSPIRES. The questions and answers submitted via NSPIRES is what reviewers use, so please read NSPIRES carefully.

Item 1. Plus4-DUNS:
Note: The NSPIRES proposal coversheet only accepts 9-digit DUNS numbers. If applying as an embedded Informal Education Institution (IEI), provide a valid 13-digit (+4DUNS) in the text box below. Otherwise, indicate "Not Applicable." Caution: Do not leave blank.

Item 2. Certification of organizational eligibility to submit proposal to 2017 CP4SMPVC solicitation. Check ONLY one:
- Museum or Planetarium
- NASA Visitor Center
- Youth Serving Organization
- Library

Item 3. CP4SMPVC Technical Content Area
Select the Technical Content Area(s) that are most directly applicable for the proposal or choose Not proposing to compete in CP4SMPVC:
- Aeronautics
- Earth Science
- Microgravity
- Space Exploration (includes human space flight)
- Space Science
- Not proposing to compete in CP4SMPVC

Item 4. Project Classification. Check ONLY one:
(1) Project Development and Implementation, utilizing evidence-based approaches (i.e. backed by research evidence that proves its effectiveness)
(2) Pilot Project, that also budgets for a needs assessment, conference gathering or symposia, or other type of study to understand the effectiveness of an approach
(3) Combination of types (1) and (2)
(4) Not applicable or don’t know
Item 5. Submitting Organization’s URL:

Item 6. Select one or more Institution Type (do not repeat your choice in Item 3):
Air and space center
Amateur astronomy group
American Indian and Alaska Native Serving Institution (AIANSI)
Aquarium
Arboretum
Asian American and Native American Pacific Islander-Serving Institution (AANAPISI)
Association of eligible institutions as recognized by the Internal Revenue Service
Association that includes eligible institutions and ineligible institutions
Aviary
Aviation museum
Botanical garden
Boys and Girls Club
Children's museum
Congressionally-authorized NASA memorial; e.g., Challenger Center
College (4-year)
Community College
Community-based Organization
Hispanic-Serving Institution (HSI)
Historically Black College or University (HBCU)
K-12 School or School System
Library (school, local, regional)
Minority Serving Institution (MSI) (Title IV college or university)
National, state or local park
Natural history museum
Nature center
NASA Visitor Center (Federal)
NASA Visitor Center (non-Federal)
Observatory visitor center
Out-of-school-time organization
Parks and recreation department
Planetarium
Science-technology center
Scientific or engineering society
State, local or Federal museum
State, local, or Federally-recognized tribal government museum or planetarium
Theater or auditorium dedicated to astronomical shows
Tribal College or University (TCU)
University
Youth-serving organization (national)
Youth-serving organization (independent)
Zoo
Unlisted Type/Other
Item 7. Explain “Other or Unlisted Institution Type” or say “Not Applicable”

Item 8. Select one NASA Mission Directorate or Office that has a content and/or educational priority(s) primarily applicable to the proposal (refer to Appendix A).
- Aeronautics Research Mission Directorate (ARMD)
- Human Exploration and Operations Mission Directorate (HEOMD)
- Science Mission Directorate (SMD)
- Space Technology Mission Directorate (STMD)
- Related Equally to ARMD, HEOMD, SMD, and STMD—Major priorities from multiple mission directorates
- Office of Education Educator Professional Development
- Office of Education STEM Engagement
- Office of Communications (includes but is not limited to NASA Exhibits, History)
- Office of Diversity and Equal Opportunity
- Institutional Engagement

Item 9. Select one or more NASA Mission Directorates or Offices with content and/or educational priority(s) of secondary applicability to the proposal (See Appendix A).
- Aeronautics Research Mission Directorate (ARMD)
- Human Exploration and Operations Mission Directorate (HEOMD)
- Science Mission Directorate (SMD)
- Space Technology Mission Directorate (STMD)
- Related Equally to ARMD, HEOMD, SMD, and STMD—Major priorities from multiple mission directorates
- Office of Education Educator Professional Development
- Office of Education STEM Engagement
- Office of Communications (includes but is not limited to NASA Exhibits, History)
- Office of Diversity and Equal Opportunity
- Institutional Engagement

Item 10. Activities with NASA Center(s) (NC)/JPL or NASA/JPL Visitor Center(s) (VC)—Select one or more:
- No specific activity with any NC or VC
- Planned activities with NCs or VCs
- Confirmed activities with NCs or VCs
- Ames Research Center-ARC Mountain View, CA
- Exploration Center-ARC’s federal VC
- Armstrong Flight Research Center-AFRC Edwards, CA
- Aero Institute, Palmdale, CA-non-federal (AFRC)
- Glenn Research Center, OH
- Great Lakes Science Center-GRC’s non-Federal VC
- Goddard Space Flight Center-GSFC, Greenbelt, MD
Wallops Island VC (federal)
Greenbelt VC (federal)
Maryland Science, Exploration, and Education Center at Goddard (non-federal)
Jet Propulsion Laboratory-JPL Pasadena, CA
von Karman Visitor Center-JPL’s non-federal VC
Johnson Space Center-JSC TX
Space Center Houston-JSC’s non-federal VC
Kennedy Space Center-KSC FL
KSC Visitor Center (federal concession)
Langley Research Center-LaRC Hampton, VA
Virginia Air and Space Center-LaRC’s non-federal VC
Marshall Space Flight Center-MSFC Huntsville, AL
U.S. Space and Rocket Center-MSFC’s non-federal VC
Stennis Space Center-SSC Bay Saint Louis, MS
Infinity Science Center –SSC’s non-federal VC

**Item 11. List any other NASA collaborators (individuals or facilities):**

**Item 12. List any other federal entity the proposed project intends to involve, and include the cities and states of any local/regional branches of the entity that are intended to be part of the involvement:**

**Item 13. List any non-federal institutional partner organizations (e.g., Boys and Girls Clubs, local schools, 4-H. etc.) and include the cities and states of the local/regional branches of the partner that are intended to be part of the involvement.**

**Item 14. If the project involves targeted activities predominantly serving populations underserved in STEM, or a partnership with such an institution, please indicate type or check not applicable**

- American Indian or Alaskan Native
- Asian/Pacific Islanders
- Black/African American
- Hispanic or Latino
- Native Hawaiian or other Pacific Islander
- Rural
- Urban/Inner City
- Veterans
- Women and/or Girls
- American Indian and Alaska Native Serving Institution (AIANSI)
- Asian American and Native American Pacific Islander-Serving Institution (AANAPISI)
- Hispanic-Serving Institution (HSI)
- Historically Black College or University (HBCU)
- Minority Serving Institution (MSI) (Title IV college or university)
- Tribal College or University (TCU)
- Other underserved (give specific answer in Item 15)
Item 15. Explain “Other Underserved” from Item 14 or say “Not Applicable”

Item 16. Select one or more primary types of educational product and/or program that this project is expected to develop:
- Badge/project guide
- Course
- Educator guide/manual
- Educator professional development
- e-learning experience (distance learning/social media)
- Exhibit – permanent
- Exhibit – temporary or traveling
- Field trip
- Internship/apprenticeship (short-term STEM-related work/opportunities)
- Interpretive programming
- Kiosk interactive
- Museum outreach program
- Planetarium show
- Public special event
- Research/study publication
- SOS/spherical display/show
- Student guide
- Student or teacher research experience
- Symposium/conference
- Video/video clips
- Website
- Youth STEM learning program (summer, afterschool, weekend, etc.)
- Other

Item 17. Please provide your Data Management Plan (DMP). If research will not be conducted, or if research will be conducted but the proposer believes a DMP is not required because of the nature of the activity, then a statement should be included to that affect.

>>>End of CP4SMPVC PSD
APPENDIX H. Special Advisory Regarding Grants.gov Submissions to CP4SMPVC

WARNING! The required program specific data sheet (Appendix H) is not available via grants.gov. Be sure to include your answers to the program specific data sheet (PSD) as an appendix.

Applicants choosing to submit a proposal via Grants.gov also shall register with NSPIRES well in advance of the proposal due date. Grants.gov proposals are transcribed manually to NSPIRES so that NASA can review the proposal. Grants.gov proposals cannot be transcribed for entities 1) not eligible to compete or 2) not registered in NSPIRES by the due date for proposals for this NRA.

Technical Note: Grants.gov does not use the NASA budget template and lacks data quality control checks available to proposals submitted via NSPIRES.

In order to submit a proposal via Grants.gov, Grants.gov requires that the PI download an application package from Grants.gov. Identifying the appropriate application package requires the funding opportunity number for that program; the funding opportunity number may be found in the Summary of Key Information subsection for each Appendix that concludes each activity description. Proposals submitted via Grants.gov shall be submitted by the AOR.

Submitting a proposal via Grants.gov requires the following steps:

- Follow Grants.gov instructions provided at the website to download any software tools or applications required to submit.
- Complete the required Grants.gov forms including the SF424 (R&R) Application for Federal Assistance, R&R Other Project Information, R&R Senior/Key Person Profile, and R&R Budget. Every named individual shall be identified with the institution through which they are participating in the proposal, regardless of their place of permanent employment or preferred mailing address.
- Complete the required NASA specific forms: NASA Other Project Information, NASA Principal Investigator and Authorized Representative Supplemental Data Sheet, NASA Senior/Key Person Supplemental Data Sheet (this form is only required if there are Senior/Key Persons other than the Principal Investigator).
- Complete any NASA program-specific forms required for CP4SMPVC. Due to legacy practice, Grants.gov still directs users to visit NSPIRES to get fillable PDFs although NSPIRES no longer hosts the templates. Ignore this Grants.gov direction to visit NSPIRES, because Grants.gov users cannot get the fillable PDF files anywhere on NSPIRES to use in a Grants.gov application.

Note: On grants.gov not all required forms are under the section 2: Download Application Package. Some application forms are in the section 1: Application Instructions Package at: http://www.grants.gov/applicants/apply-for-grants.html. For example, the SF 424 form family used by Grants.gov requires the project summary to be an attached document, so complete the fillable “Proposal Summary” PDF from Grants.gov. CP4SMPVC also requires a Program/Project Specific Data template. Find these required elements of the application package for CP4SMPVC.
(i.e., fillable PDFs) on Grants.gov under 1. Download Application Instructions. Create a proposal in PDF including the project description and all other required proposal sections (see the NASA Guidebook for Proposers). Upload sections as separate PDFs as prompted by Grants.gov.

- Submit the proposal via the AOR; the proposal PI may not submit the application to Grants.gov unless he/she is an AOR.
- Proposed project personnel do NOT need to register with Grants.gov.
- Every individual named (proposed project personnel) in the CP4SMPVC proposal as a team member in any role, including PI, Co-Investigators and collaborators shall be registered in NSPIRES (http://nspires.nasaprs.com). Individuals shall perform this registration themselves; no one may register a second party, even the PI of a proposal in which that person is committed to participate. This data site is secure and all information entered is strictly for NASA’s use only.


Instructions for NASA-specific forms and NASA program-specific forms may be found in the application package and at http://nspires.nasaprs.com/external/faq.do - gq2. These NASA program-specific forms are required, and failure to properly include them may result in the proposal being deemed nonresponsive and not submitted to peer review for evaluation. For any questions that cannot be resolved with the available on-line help menus and documentation, requests for assistance may be directed by e-mail to support@grants.gov or by telephone to (800) 518-4726.

Submission of electronic proposals via Grants.gov that are transcribed to NSPIRES requires several coordinated actions within the proposing institution. In particular, when the PI has completed entry of the data requested in the required electronic forms and attachment of the allowed PDF attachments, (including the project description section), an official at the PI’s institution who is authorized to make such a submission (referred to as the AOR) shall submit the electronic proposal (forms plus attachments). Coordination between the PI and his/her AOR on the final editing and submission of the proposal materials is facilitated through their respective accounts in NSPIRES.

Note: If one individual is serving in both the PI and AOR roles, he/she shall ensure that separate registrations in NSPIRES for both roles is completed by the proposal due date.

Grants.gov provides the proposals to NASA and then those proposals are transcribed to NSPIRES for applicants who registered in NSPIRES by the date that proposals are due. NSPIRES generates a NASA proposal number for the Grants.gov users and sends a notification e-mail. Depending on the volume of proposals submitted to Grants.gov, Grants.gov users can expect an email no earlier than 15 business days from the proposal due date. If a Grants.gov submitter has not registered completely in NSPIRES (including AOR, PI, proposed sub awards) by the time NASA is ready to transcribe the proposal, the proposal will be considered late. (See Appendix I.)
Finally, if a Grants.gov submitter did not format the proposal so it can be transcribed cleanly (without consultation with the submitter) into NSPIRES for review, the Grants.gov proposal will be disqualified. Grants.gov users are responsible for understanding all the required fields in NSPIRES to ensure accurate transcription. NASA is not responsible for transcription errors in NSPIRES for proposals submitted to Grants.gov.
APPENDIX I. CP4SMPVC Policy on Late Proposals

NASA does not pre-approve the submission of a late proposal. The decision to submit a late proposal is solely that of the proposer, and it is then NASA’s decision whether to accept it or not. In most cases, late proposals will not be accepted. If NSPIRES is available for submissions, the site automatically captures the time that the system received the proposal. Proposals submitted later than 11:59 PM Eastern time on the due date of proposals are considered “LATE.” The NSPIRES system may prevent the submission of proposals after the deadline.

Note: Grante.gov does not provide real time confirmation that a proposal has been submitted on time or by the due date. A Grants.gov proposer may be able to finish a submission minutes or hours after the due date, but then may receive notification from Grants.gov hours or days later that the proposal missed the deadline. This NRA does not accept proposals that Grants.gov received after the proposal due date.

When proposals are submitted through NSPIRES, NSPIRES generates an automatic acknowledgement. The acknowledgement for on time and late proposals is the same and will resemble the following:

Sample Acknowledgement of Submission
-----Original Message-----
From: nspires@nasaprs.com
Sent: <Name of the day of the Week>, Name of Month, Date, Year <Message Time Hour:Minute>
To: <email address of submitter>
Cc: <email address of submitter>
Subject: NASA NSPIRES - Proposal has been submitted to NASA

The following proposal has been submitted for consideration of an award by NASA:
Proposal Number: xx-201?[EONS Appendix]-000X
Proposal Title: <Name as submitted by the AOR>
Submitting Organization: <Name that shows up in NSPIRES>
Authorized Organization Representative: First and then Last NAME
Principal Investigator: First then Last NAME
Date submitted: Numeric Month/ Numeric Day /Numeric Year Hour:Minute:Second
To log in to NSPIRES, click on this link: http://nspires.nasaprs.com/
If the above URL is not an active link, please cut and paste the entire URL into your web browser.

If you have questions or problems regarding this, or any other NSPIRES business, please contact the NSPIRES Help Desk:

   E-mail: NSPIRES-HELP@nasaprs.com
   Phone Support: (202) 479-9376
   Hours: Monday through Friday, 8:00 AM to 6:00 PM EST/EDT

This message is being sent from an outbound-only mail server. Please do not reply to this message.

----------------------------------------------End of Excerpt----------------------------------
If your entity does not receive a notice similar to the sample above after submission of your proposal, check spam filters and junk boxes. If unable to locate the e-mail acknowledgement, then contact the NSPIRES Help Desk or log in directly to NSPIRES to check a submission status.

Only the Selection Official or a designee may accept a late proposal for assignment to external review. Late proposals normally are only considered for review if there is a practical way of reviewing the proposal along with the on-time proposals. If for some known or unknown reason your entity's proposal was not submitted by the proposal due date, send a detailed explanatory note via e-mail to the Support Contractor for this NRA:

Althia Harris
NASA Research & Education Support Services
2345 Crystal Drive, Suite 500
Arlington, VA 22202
202-479-9030
202-479-0511 (fax)
Email: help@nasaprs.com

Decisions about each proposal submitted—either on time or late—will be communicated electronically (not by phone or personalized email) to each PI and AOR via NSPIRES. It is entirely possible that a late proposer might not know whether or not it was accepted for review until all proposers are notified approximately nine months from the NRA's proposal due date. When decisions are made a computer-generated e-mail goes out requesting the PI/AOR to log in. It will resemble the following:

**Sample Decision Notice E-mail**
-----Original Message-----
From: nspires@nasaprs.com [mailto:nspires@nasaprs.com]
Sent: Name of Weekday, Month ??, 20?? H:Min PM/AM
To: NSPIRES-admin@nasaprs.com
Subject: NASA NSPIRES - Decision has been made.
A decision has been made by NASA for:
   Solicitation Number: NNH????????
   Solicitation Title: [EONS Appendix Reference]
   Acronym: [EONS Appendix Reference]
   Proposal Due Date: 0?/??/20??
You may access information regarding this decision by logging in to NSPIRES:
http://nspires.nasaprs.com/
Decision information can be accessed in two ways:
   After logging in, the Principal Investigator selects the "Proposals" link, the "Submitted Proposals/NOIs" link, and then clicks on the proposal submitted to the solicitation identified above. The document(s) provided by NASA will be displayed under the heading "PI Information Package" located at the bottom of the "View Proposal" page.
   After logging in, the Authorized Organization Representative selects "Organization Mgmt" link and, from within the submitting organization, selects the "Organization Proposals" link, the "Submitted Proposals" link and then clicks on the proposal submitted to the solicitation
identified above. The document(s) provided by NASA will be displayed under the heading "PI Information Package" located at the bottom of the "View Proposal" page.

If the above URL is not an active link, please cut and paste the entire URL into your web browser.

If you have questions or problems regarding this, or any other NSPIRES business, please contact the NSPIRES Help Desk:
E-mail: nspires-help@nasaprs.com
Phone Support: (202) 479-9376
Hours: Monday through Friday, 8:00 AM to 6:00 PM EST/EDT
This message is being sent from an outbound-only mail server. Please do not reply to this message.


Allowances for Technical Problems

Proposers are advised in every NASA solicitation that it is their responsibility to begin the proposal submission process early enough to account for ubiquitous technical problems with computer systems and with the internet. If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume. An example might be an act of nature (e.g., hurricane or blizzard affecting NASA or a proposer’s region) or an act of man (e.g., NSPIRES is offline). The failure of the proposing team to complete its proposal prior to the deadline, for whatever reason, does not constitute a technical problem. The failure of the proposer to meet a known delivery deadline does not constitute a technical problem. Other circumstances that may constitute a technical problem will be reviewed on a case-by-case basis.

The NASA Selection Official may declare a proposal “on time” if a proposal would have been received by NASA before the proposal deadline in the absence of the technical problem, if the technical problem cannot be reasonably anticipated and is beyond the reasonable control of the proposer, and if the proposer does not gain a competitive advantage through these circumstances.

Any Changes or Revisions to a Proposal After the Due Date make the Proposal Late:

It is not possible for a proposal to be updated, particularly the substance of a proposal, without NASA considering such revisions/updates as a late proposal. If a proposer wants to provide new material, revise, clarify or change or expand a submitted proposal, such a substantial update is akin to submitting a new proposal after the proposal’s due date. Changes or updates to basic descriptive data (e.g., a PI has retired or the submitting organization has a new President) are not changes to the proposal’s substance under the NRA; however, they cannot be reflected in the proposal submission either nor can they be considered in the review of the proposal. If during the course of the time between the proposal due date and decision announcement, there have been changes to the AOR and PI, please immediately notify the above mentioned NSPIRES Support
Contractor for this NRA to confirm that the proposing organization will still be able to access NSPIRES.
APPENDIX J. Sample Proposal Cover Page

This form is electronically generated by NSPIRES upon submission by proposer’s AOR.

<table>
<thead>
<tr>
<th>NASA Cover Page for Proposal Submitted to the National Aeronautics and Space Administration</th>
<th>NASA Proposal Number</th>
</tr>
</thead>
</table>

**NASA PROCEDURE FOR HANDLING PROPOSALS**

The proposal shall be used and disclosed for evaluation purposes only, and a copy of this Government notice shall be applied to any reproduction or abstract thereof. Any authorized restrictive notices that the submitter places on this proposal shall also be strictly complied with. Disclosure of the proposal for any reason outside the Government evaluation purposes shall be made only to the extent authorized by the Government.

<table>
<thead>
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<th>Principal Investigator</th>
<th>Email Address</th>
<th>Phone Number</th>
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<th>Year 2 Budget</th>
<th>Year 3 Budget</th>
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**SECTION II - Application Information**

NASA Program Announcement Number | NASA Program Announcement Title

For Consideration By NASA Organization (the soliciting organization, or the organization to which an unsolicited proposal is submitted)

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<th>Other Federal Agencies to Which Proposal Has Been Submitted</th>
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<table>
<thead>
<tr>
<th>International Participation</th>
<th>Type of International Participation</th>
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</table>

**SECTION III - Submitting Organization Information**

DUNS Number | CAGE Code | Employer Identification Number (EIN or TIN) | Organization Type
|-------------|----------|---------------------------------------------|------------------|

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<th>Organization Name (Standard/Legal Name)</th>
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<th>Postal Code</th>
<th>Country Code</th>
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**SECTION IV - Proposal Point of Contact Information**

<table>
<thead>
<tr>
<th>Name</th>
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<th>Phone Number</th>
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**SECTION V - Certification and Authorization**

Certification of Compliance with Applicable Executive Orders and U.S. Code

By submitting the proposal identified in the Cover Sheet/Proposal Summary in response to this NASA Announcement, the Authorized Official of the proposing organization (or the individual proposer if there is no proposing organization) as identified below:

- certifies that the statements made in this proposal are true and complete to the best of his knowledge;
- agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- confirms compliance with all provisions, rules, and regulations set forth in the two Certifications and one Assurance contained in this NASA Announcement (namely, (i) the Assurance of Compliance with Executive Orders Pursuant to Non-Discrimination in Federally Assisted Programs, and (ii) Certifications, Disclosures, and Assurances Regarding Lobbying and Documentation).

With all provision of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

Authorized Organizational Representative (AOR) Name | AOR E-mail Address | Phone Number |
|--------------------------------------------------|-------------------|--------------|

AOR Signature (Must have AOR’s original signature. Do not sign for AOR) | Date |
|----------------|-------|

FORM NRESS-360 Version 3.0 Apr 00
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<td>Is proprietary privileged information included in this application?</td>
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<tr>
<td>Are NASA civil servant personnel participating as team members on this project (include funded and unfunded)?</td>
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<th>Fiscal Year</th>
<th>Fiscal Year</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of FTEs</td>
<td>Number of FTEs</td>
<td>Number of FTEs</td>
<td>Number of FTEs</td>
<td>Number of FTEs</td>
</tr>
</tbody>
</table>

FORM NRE50-300 Version 3.0 Apr 06
## SECTION VIII - Other Project Information

### Environmental Impact

<table>
<thead>
<tr>
<th>Does this project have an actual or potential impact on the environment?</th>
<th>Has an exemption been authorized or an environmental assessment (EA) or an environmental impact statement (EIS) been performed?</th>
</tr>
</thead>
</table>

**Environmental Impact Explanation:**

**Exemption/EA/EIS Explanation:**

---

FORM NRE50-300 Version 3.0 Apr 09
**SECTION VII - Other Project Information**

**Historical Site/Object Impact**

Does this project have the potential to affect historic, archaeological, or traditional cultural sites (such as Native American burial or ceremonial grounds) or historic objects (such as an historic aircraft or spacecraft)?

<table>
<thead>
<tr>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Budget Cost Category</td>
</tr>
<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>A. Direct Labor - Key Personnel</td>
</tr>
<tr>
<td>B. Direct Labor - Other Personnel</td>
</tr>
<tr>
<td>C. Direct Costs - Equipment</td>
</tr>
<tr>
<td>D. Direct Costs - Travel</td>
</tr>
<tr>
<td>E. Direct Costs - Participant/Trainee Support Costs</td>
</tr>
<tr>
<td>F. Other Direct Costs</td>
</tr>
<tr>
<td>G. Total Direct Costs (A+B+C+D+E+F)</td>
</tr>
<tr>
<td>H. Indirect Costs</td>
</tr>
<tr>
<td>I. Total Direct and Indirect Costs (G+H)</td>
</tr>
<tr>
<td>J. Fee</td>
</tr>
<tr>
<td>K. Total Cost (G+J)</td>
</tr>
<tr>
<td>Total Cumulative Budget</td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Total Key Personnel Costs**: 0.00

<table>
<thead>
<tr>
<th>Number of Personnel</th>
<th>Project Role</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Summ. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Total Number Other Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Total Other Personnel Costs**: 0.00

**Total Direct Labor Costs (Salary, Wages, Fringe Benefits) (A+B)**: 0.00
SECTION X - Budget

Start Date: | End Date: | Budget Type | Budget Period: | NASA Proposal Number
---|---|---|---|---

C. Direct Costs - Equipment

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Equipment Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Equipment Costs</td>
<td>0.00</td>
</tr>
</tbody>
</table>

D. Direct Costs - Travel

<table>
<thead>
<tr>
<th></th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Domestic Travel (including Canada, Mexico, and U.S. Possessions)</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Foreign Travel</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Total Travel Costs</td>
</tr>
</tbody>
</table>

E. Direct Costs - Participant/Trainee Support Costs

<table>
<thead>
<tr>
<th></th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tuition/Fees/Health Insurance</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Stipends</td>
<td>0.00</td>
</tr>
<tr>
<td>3. Travel</td>
<td>0.00</td>
</tr>
<tr>
<td>4. Subsistence</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Number of Participants/Trainees:</td>
</tr>
</tbody>
</table>
## SECTION X - Budget

<table>
<thead>
<tr>
<th>Start Date</th>
<th>End Date</th>
<th>Budget Type</th>
<th>Budget Period</th>
</tr>
</thead>
</table>

### F. Other Direct Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Materials and Supplies</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Publication Costs</td>
<td>0.00</td>
</tr>
<tr>
<td>3. Consultant Services</td>
<td>0.00</td>
</tr>
<tr>
<td>4. ADP/Computer Services</td>
<td>0.00</td>
</tr>
<tr>
<td>5. Subawards/Consortium/Contractual Costs</td>
<td>0.00</td>
</tr>
<tr>
<td>6. Equipment or Facility Rental/User Fees</td>
<td>0.00</td>
</tr>
<tr>
<td>7. Alterations and Renovations</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total Other Direct Costs</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

### G. Total Direct Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Direct Costs</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

### H. Indirect Costs

<table>
<thead>
<tr>
<th>Cognizant Federal Agency</th>
<th>Indirect Cost Rate (%)</th>
<th>Indirect Cost Base ($)</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

### I. Direct and Indirect Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Direct and Indirect Costs (G+H)</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

### J. Fee

<table>
<thead>
<tr>
<th>Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee</td>
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### K. Total Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Cost with Fee (I+J)</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

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FORM NRES-300 Version 2.0 Apr 00
### SECTION X - Budget

Start Date: | End Date: | Budget Type: | Budget Period: |
---|---|---|---|

#### A. Direct Labor - Key Personnel

<table>
<thead>
<tr>
<th>Name</th>
<th>Project Role</th>
<th>Base Salary ($)</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Summ. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Total Key Personnel Costs: 0.00

#### B. Direct Labor - Other Personnel

<table>
<thead>
<tr>
<th>Number of Personnel</th>
<th>Project Role</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Summ. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Total Number Other Personnel</td>
<td>Total Other Personnel Costs</td>
<td>0.00</td>
<td></td>
<td></td>
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</table>

Total Direct Labor Costs (Salary, Wages, Fringe Benefits) (A+B): 0.00
### SECTION X - Budget

<table>
<thead>
<tr>
<th>Start Date</th>
<th>End Date</th>
<th>Budget Type</th>
<th>Budget Period</th>
</tr>
</thead>
</table>

#### C. Direct Costs - Equipment

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Equipment Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Equipment Costs</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### D. Direct Costs - Travel

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Domestic Travel</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Foreign Travel</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Travel Costs</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### E. Direct Costs - Participant/Trainee Support Costs

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tuition/Feef/Health Insurance</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Stipends</td>
<td>0.00</td>
</tr>
<tr>
<td>3. Travel</td>
<td>0.00</td>
</tr>
<tr>
<td>4. Subsistence</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Participant/Trainee Support Costs</td>
<td>0.00</td>
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</tbody>
</table>
### SECTION X - Budget

<table>
<thead>
<tr>
<th></th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. Other Direct Costs</td>
<td></td>
</tr>
<tr>
<td>1. Materials and Supplies</td>
<td>0.00</td>
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<tr>
<td>2. Publication Costs</td>
<td>0.00</td>
</tr>
<tr>
<td>3. Consultant Services</td>
<td>0.00</td>
</tr>
<tr>
<td>4. SPL/Computer Services</td>
<td>0.00</td>
</tr>
<tr>
<td>5. Subawards/Consortium/Contractual Costs</td>
<td>0.00</td>
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<tr>
<td>6. Equipment or Facility Rental/Use Fees</td>
<td>0.00</td>
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<tr>
<td>7. Alterations and Renovations</td>
<td>0.00</td>
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<td><strong>0.00</strong></td>
</tr>
<tr>
<td>G. Total Direct Costs</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total Direct Costs (A+B+C+D+E+F)</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td>H. Indirect Costs</td>
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</tr>
<tr>
<td>Cognizant Federal Agency:</td>
<td></td>
</tr>
<tr>
<td><strong>Total Indirect Costs</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td>I. Direct and Indirect Costs</td>
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</tr>
<tr>
<td><strong>Total Direct and Indirect Costs (G+H)</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td>J. Fee</td>
<td></td>
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<td><strong>Funds Requested ($)</strong></td>
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<tr>
<td>K. Total Cost</td>
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</tr>
<tr>
<td><strong>Funds Requested ($)</strong></td>
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</tr>
<tr>
<td><strong>Total Cost with Fee (I+J)</strong></td>
<td><strong>0.00</strong></td>
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</table>
### SECTION X - Budget

<table>
<thead>
<tr>
<th>Name</th>
<th>Project Role</th>
<th>Base Salary ($)</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Summ. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
<th>Total Key Personnel Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

B. Direct Labor - Other Personnel

<table>
<thead>
<tr>
<th>Number of Personnel</th>
<th>Project Role</th>
<th>Cal. Months</th>
<th>Acad. Months</th>
<th>Summ. Months</th>
<th>Requested Salary ($)</th>
<th>Fringe Benefits ($)</th>
<th>Funds Requested ($)</th>
<th>Total Other Personnel Costs</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
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</tbody>
</table>

Total Number Other Personnel: 0

Total Direct Labor Costs (Salary, Wages, Fringe Benefits) (A+B): 0.00

FORM NPRSS-300 Version 3.0 Apr 09
### SECTION X: Budget

**Start Date:**

**End Date:**

**Budget Type:**

**Budget Period:**

#### C. Direct Costs - Equipment

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Equipment Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total Equipment Costs</td>
</tr>
</tbody>
</table>

#### D. Direct Costs - Travel

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Domestic Travel (Including Canada, Mexico, and U.S. Possessions)</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Foreign Travel</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Travel Costs</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### E. Direct Costs - Participant/Trainee Support Costs

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tuition/Fees/Health Insurance</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Stipends</td>
<td>0.00</td>
</tr>
<tr>
<td>3. Travel</td>
<td>0.00</td>
</tr>
<tr>
<td>4. Subsistence</td>
<td>0.00</td>
</tr>
<tr>
<td>Number of Participants/Trainees:</td>
<td></td>
</tr>
<tr>
<td>Total Participant/Trainee Support Costs</td>
<td>0.00</td>
</tr>
<tr>
<td>PI Name:</td>
<td>NASA Proposal Number</td>
</tr>
<tr>
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<td>----------------------</td>
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<tr>
<td>Organization Name:</td>
<td></td>
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<tr>
<td>Proposal Title:</td>
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</table>

## SECTION X - Budget

<table>
<thead>
<tr>
<th>Start Date:</th>
<th>End Date:</th>
<th>Budget Type:</th>
<th>Budget Period:</th>
</tr>
</thead>
</table>

### F. Other Direct Costs

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Materials and Supplies</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Publication Costs</td>
<td>0.00</td>
</tr>
<tr>
<td>3. Consultant Services</td>
<td>0.00</td>
</tr>
<tr>
<td>4. ADP/Computer Services</td>
<td>0.00</td>
</tr>
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<td>6. Equipment or Facility Rental/User Fees</td>
<td>0.00</td>
</tr>
<tr>
<td>7. Alterations and Renovations</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total Other Direct Costs</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

### G. Total Direct Costs

| Total Direct Costs (A+B+C+D+E+F) | Funds Requested ($) | **0.00** |

### H. Indirect Costs

<table>
<thead>
<tr>
<th>Cognizant Federal Agency:</th>
<th>Indirect Cost Rate (%)</th>
<th>Indirect Cost Base ($)</th>
<th>Funds Requested ($)</th>
<th>Total Indirect Costs:</th>
</tr>
</thead>
</table>

### I. Direct and Indirect Costs

| Total Direct and Indirect Costs (G+H) | Funds Requested ($) | **0.00** |

### J. Fee

| Fee | Funds Requested ($) | **0.00** |

### K. Total Cost

| Total Cost with Fee (I+J) | Funds Requested ($) | **0.00** |
APPENDIX K. Statements of Commitment and Letters of Support

Please refer to the NASA Guidebook for Proposers for basic information about Statements of Commitment and Letters of Support related to acknowledgement of the intent to commitment to the proposed effort from every Co-PI, Co-I, and Collaborator, and “Letters of Affirmation”.

Letters of Support Involving Assets

A letter of support is required from the owner of any facility or resource that is not under the PI’s direct control, acknowledging that the facility or resource is available for the proposed use during the proposal period. For Government facilities, the availability of the facility to users is often stated in the facilities documentation or web page. Where the availability is not publicly stated or where the proposed use goes beyond the publicly stated availability, a statement, signed by the appropriate Government official at the facility verifying that it will be available for the required effort, is sufficient. Proposals selected for award will be required to provide information to the NSSC regarding subawards and other costs, as well as evidence of the fiscal fitness of their own organization.

NASA Centers receive and respond to many requests for education and public outreach activities that require no special resource commitments because 1) they are part of the regular business practices and are already in a Center’s budget or 2) such requests are handled on a case-by-case personnel availability basis. For example, the Speakers Bureau is a standard of NASA’s public communication and outreach programs. Details about requesting speakers can be found at: http://www.nasa.gov/about/speakers/index.html.

Partnerships come in many varieties, including some that place significant resource demands on NASA in terms of facilities, equipment, personnel, etc., and others that do not have significant demands. CP4SMPVC does not require that every proposal have a NASA Mission Directorate (MD) or Center as a “lettered” partner. It is up to each MD or Center to decide whether it desires or needs to partner through a formal letter of support, not the proposer. If appropriate, proposals can estimate a budget to cover NASA costs without having a NASA letter of support. It is important for proposals to detail the nature of the requested or agreed-to partnership in the budget narrative and reference it as part of the 15-page project description.

The following is a sample template that can be adapted to request a NASA Center or other type of partner to complete and return to your organization for inclusion with the proposal:

TITLE: Approved Letter of Support from <insert name of NASA Center or proposed partner>

The following <Describe Asset(s) e.g. facilities access, persons, other> has been requested by <name of Principal Investigator> to support this proposal to the NASA Research Announcement <alpha-numeric identifier>. It is (or is not) possible to estimate the total cost to provide this asset. A non-binding estimate of the typical cost of one day’s provision of this asset is <insert amount>. The NASA Center (or other provider) has agreed to provide this asset (contingent or not contingent) on payment from the NRA’s funding.

For proposers who are unable to get a letter of support, the following template is provided to assist in justifying the budget request:
TITLE: Request Pending for Letter of Support from <insert name of NASA Center or proposed partner>

The date of my first request for a letter of support was <insert date>. The following <Describe Asset(s) e.g. facilities access, persons, other> has/have been requested by <name of Principal Investigator> to support this proposal to the NASA Research Announcement <alphanumeric identifier>. Ultimately, the proposed partner did not reply to my request, but I estimated in the budget based on publicly available documents or calls to the proposed partner that the total cost to provide this asset to be <insert amount>.

OR

The proposed partner replied to my request that I do not need a letter of support to access this asset. I have included that reply as an attachment to this Pending Letter of Support to ensure reviewers understand that the level of cooperation proposed requires no special letter or support in this budget justification and narrative and no exceptional effort on the part of the requested collaborator/partner.

Letters of Support Involving Benefiting Participants or Venues

Proposals should address national, regional or local educational needs or challenges and offer solutions with potential for significant impact. Organizations/Individuals that are described in the proposal as cooperating by providing access to students, teachers, families, out-of-school time providers, venues to host exhibits, or any other aspects of the project outside the control of the proposer should provide a letter of support from the benefiting organization or entity. These letters of support should describe (using reliable and verifiable numbers) the anticipated participant diversity, the means to provide access to the proposed benefiting participants and whether there are any plans for this benefiting organization to study the impact of the partnership. For example, is a school or school system going to provide transportation to the proposed project or is the school system asking the project to pay for that service? What tangible benefit or measurable impact does the cooperating organization expect from the proposed project if it is selected? Has the proposed benefiting venue or organization reviewed the proposal? These letters should be as detailed as possible to substantiate the proposer’s claims.

Letters of Support or Reports Involving Evidence-Based Needs

All proposals should address substantiated national, regional or local educational needs or challenges (e.g., through an existing needs assessment or other evidence). In addition to clearly summarizing in the proposal’s project description the statistics for who will benefit, letters from third-party experts who will be involved in the project’s evaluation or impact assessment, if available, or whose reports inspired the proposed project can be included. If the proposed project does not have an internal or interested third-party evaluator, reliable or recent data or has not previously invested (or could not afford to invest) in research to substantiate a need for the proposed project, it may be necessary to propose a pilot project that also budgets for a needs assessment or other type of study. The letters of support for documenting evidence-based needs or research and/or evaluation should be appropriate to the proposed effort.

Letters of Endorsement or Affirmation from Elected Officials or Others

NASA uses peer reviewers and internal experts to evaluate proposals based on the stated review criteria outlined in this NRA. The NRA managers do not acknowledge or respond to letters of
endorsement or affirmation, and the reviewers do not see such letters. NASA’s Office of Legislative Affairs responds to letters of affirmation from members of Congress and other elected officials. The Privacy Act and NASA procurement rules prohibit the discussion regarding the content of any proposal under review or declined without the PI or AOR participating.
APPENDIX L. Proposal Element Details

J.1 Project Description

The Project Description shall reflect the unique ability of the lead institution and any partners to further the goals and objectives stated in Section 1.3.1. It shall clearly andconciselyillustrate the alignment with NASA’s Strategic Plan and the NASA and federal education priorities and strategic directions. The Project Description shall contain, at a minimum, the following elements: Proposal Element Details: (1) Relevance to NASA’s and this NRA’s Objectives, (2) Technical Project Plan, (3) Management and Evaluation; and (4) Past, Current, and Pending Funding Performance.

The Project Description is limited to 15 pages.

Proposers are expected to provide sufficient detail to enable review by persons who are knowledgeable in, but not necessarily specialists in, the proposed technical area. The reviewers may include personnel from NASA, individuals working in federal, state or local agencies, industry, philanthropic foundations, K-12 and institutions of higher education, firms providing evaluation of educational projects, and all types of non-competing IEIs.

Relevance to NASA’s and this NRA’s Objectives:

a) describe the relevance of the proposed work to NASA’s research and technology development priorities and the alignment with the proposed primary NASA Mission Directorate; other Mission Directorate(s) and Offices; NASA’s Strategic Plan and federal education priorities and strategic directions; and this NRA; and

b) describe the plans and expectations for long-term growth and sustainability, including participants’ connection to other NASA education opportunities.

Technical: Provide a technical project plan that describes in detail:

a) The proposal classification (Project Development and Implementation, Pilot Project, or Combination);

b) the proposed specific goals and objectives; the target audience(s); the use of NASA content and resources; the expected outcomes; methods, approaches, concepts, or technologies to be used; and the potential impact of the proposed project;

c) a partnership plan that describes any proposed collaborations with other IEIs, industry, colleges or universities, NASA, and/or other federal government agencies and indicate how they will enhance the expected outcomes;

d) the proposing institution’s capabilities, related experience, facilities, techniques, or unique combinations of these that are integral factors for achieving the proposal’s objectives, and if applicable, present evidence of past successes in NASA-funded informal education activities;

e) the qualifications, capabilities, and experience of the proposed PI and all other key personnel who are proposing to help achieve the proposal’s objectives;

f) the relationship of the proposed work to the state-of-the-art in the field, including any unique and innovative methods, approaches, concepts, or advanced technologies and evidence-based strategies to be used or piloted, and how they will enhance the expected outcomes; and
g) any plans, if applicable, for technology transfer or commercial products development and dissemination.

Management and Evaluation:

a) Present the proposed organizational and management structure of the project, including:
   i) reporting structure of the proposed project within the IEI; ii) leadership experience of the proposed IEI Project Director; iii) key personnel; iv) future staff positions committed to the proposed project; and v) the approach(es) to build infrastructure that support NASA’s education objective federal education priorities and strategic directions;

b) Describe, in a partnership plan, any partnerships or mechanisms to build partnerships with other IEIs, colleges and universities, industry, community partners, or other government agencies to enhance the ability to achieve its objectives or in order to obtain essential services not otherwise available; all partnerships should have well-defined roles and responsibilities;

c) Describe the plans for interaction and dissemination of information among project investigators and partners;

d) Present in table format the planned number, including demographics, of participants or beneficiaries of the proposed project and a pre-award baseline to which these numbers will be compared;

e) Describe in detail the metrics that will be used to evaluate impact and outcomes, the means by which the necessary information will be acquired and aggregated, and any other means by which the IEI progress will be evaluated; include a logic model in table format that identifies the project inputs, strategies, and beneficiaries, and expected outputs and outcomes. The outcomes should include a description of expected changes in the beneficiaries’ knowledge, skills, behaviors, and/or attitudes; include the lead evaluator’s qualifications and describe how they are independent of the project; describe how the products generated during the project and the evaluation results will be shared.

f) If applicable, provide a description of how an IEI will obtain and maintain longitudinal data to track learners and audiences (professional or public) relating to academic progress, employment or community-based networking;

g) Describe the structure and membership of a group of external advisors (if appropriate), and a project-level evaluation plan performed by an independent evaluator; and

h) Describe the plans for dissemination of results externally beyond the project team and institutions.

Resources:

a) Describe the resource plan for the award period, indicating the approach for distributing funds among the various proposed activities, including any sub awards. Indicate any measures that have been taken to gain cost savings or efficiencies;

b) Describe any existing facilities and equipment available to the project, and justify the need for any additional major equipment purchases or facilities upgrades; and

c) Describe the relationship of the proposed project to the IEI’s long-term strategic plan for institutional development and research.

J.2 Budget
The budget format in NSPIRES is divided into two sections: 1) the Budget Justification: Narrative and 2) the Budget Justification: Details.

The first line of the Budget Justification Narrative shall indicate whether or not the proposer requests a grant, cooperative agreement or, in the case of proposals from NASA Centers or Visitor Centers, a task order, intra-agency transfer of funds, or other commercial agreement.

Identify the number of trips, duration of each trip, air fare, per diem, rental car expenses, etc.

Justify any partnership roles in the budget justification narrative and include sufficient detail as to the assets the partner brings to the project or, if appropriate, a detailed estimated budget for a subaward.

Proposers shall provide sufficient budget justification and data to allow the peer reviewers to appropriately evaluate the cost realism, reasonableness, and acceptability of the proposed effort. The proposal shall contain sufficient cost detail and supporting information to facilitate a speedy evaluation and award. Dollar amounts proposed with no detail or explanation (e.g., merely stating Equipment: $5,000 or Labor: $23,000) may cause delays in funding if the proposal is selected. The proposed costing information shall be sufficiently detailed to allow the Government to identify cost elements for evaluation purposes. Each category shall be explained. Proposers should exercise prudent judgment since the amount of detail necessary varies with the complexity of the proposal.

Direct labor costs shall be separated by titles or disciplines such as PI and clerical support, with percent of time. Estimates shall include the basis, such as currently paid rates or outstanding offers to prospective employees. With regard to other costs, each significant category shall be detailed, explained, and substantiated. For example, proposed equipment purchases shall specify the type of equipment, number of units, and unit cost. Requested travel allowances shall include the number of trips, duration of each trip, air fare, per diem, rental car expenses, etc.

Proposers requesting access to NASA technical services or materials shall contact the NASA Centers (excluding JPL) from which services or materials will be requested in order to ascertain the availability and anticipated costs of such services or materials (see Appendix M: NASA Points of Contact).

If contact with a NASA Center or Mission Directorate or Office at NASA Headquarters gets no response, document the details of the requested NASA assets and the attempts to reach NASA within the budget justification of the proposal. Most costs that NASA Centers incur for the use of facilities and contracted technical support are expected to come from non-CP4SMPVC funds.
APPENDIX M. Points of Contact for NASA Mission Directorates, Centers, and Support Offices

NASA Mission Directorate Contacts

<table>
<thead>
<tr>
<th>Aeronautics Research Mission Directorate</th>
<th>Science Mission Directorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Rugg</td>
<td>Mary Frances Sladek</td>
</tr>
<tr>
<td>Education Liaison</td>
<td>Program Manager, Science Engagement and Partnerships</td>
</tr>
<tr>
<td>NASA Headquarters</td>
<td>NASA Headquarters</td>
</tr>
<tr>
<td>Phone: (202) 358-2197</td>
<td>Phone: (202) 358-0861</td>
</tr>
<tr>
<td><a href="mailto:karen.l.rugg@nasa.gov">karen.l.rugg@nasa.gov</a></td>
<td><a href="mailto:mary.f.sladek@nasa.gov">mary.f.sladek@nasa.gov</a></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Human Exploration and Operations Mission Directorate</th>
<th>Space Technology Mission Directorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elsie Weigel</td>
<td>Diego F. Rodriguez</td>
</tr>
<tr>
<td>Education Lead</td>
<td>Education Lead</td>
</tr>
<tr>
<td>NASA Headquarters</td>
<td>NASA Headquarters</td>
</tr>
<tr>
<td>Phone: (202) 358-2345</td>
<td>Phone: (202) 358-1943</td>
</tr>
<tr>
<td><a href="mailto:Elsie.Weigel@nasa.gov">Elsie.Weigel@nasa.gov</a></td>
<td><a href="mailto:Diego.F.Rodriguez@nasa.gov">Diego.F.Rodriguez@nasa.gov</a></td>
</tr>
</tbody>
</table>
### NASA Center* and JPL Contacts

<table>
<thead>
<tr>
<th><strong>Ames Research Center, CA</strong></th>
<th><strong>Johnson Space Center, TX</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brenda J. Collins</td>
<td>Kayla Smith</td>
</tr>
<tr>
<td>Division Chief, Office of Education and Public Engagement</td>
<td>Education Program Specialist</td>
</tr>
<tr>
<td>Phone: (650) 604-3540</td>
<td>Phone: (281) 792.7879</td>
</tr>
<tr>
<td><a href="mailto:Brenda.J.Collins@nasa.gov">Brenda.J.Collins@nasa.gov</a></td>
<td><a href="mailto:Kayla.L.Smith@nasa.gov">Kayla.L.Smith@nasa.gov</a></td>
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<table>
<thead>
<tr>
<th><strong>Armstrong Flight Research Center, CA</strong></th>
<th><strong>Kennedy Space Center, FL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Miranda Martin</td>
<td>Denise Coleman</td>
</tr>
<tr>
<td>Education Specialist</td>
<td>Education Programs Office</td>
</tr>
<tr>
<td>Phone: (661) 276-2527</td>
<td>Phone: (321) 867-8768</td>
</tr>
<tr>
<td><a href="mailto:Miranda.martin@nasa.gov">Miranda.martin@nasa.gov</a></td>
<td><a href="mailto:Denise.Y.Coleman@nasa.gov">Denise.Y.Coleman@nasa.gov</a></td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>Glenn Research Center, OH</strong></th>
<th><strong>Langley Research Center, VA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephanie Brown-Houston</td>
<td>Susan F. Cooper</td>
</tr>
<tr>
<td>Education Programs Specialist</td>
<td>Education Operations Manager</td>
</tr>
<tr>
<td>Phone: 216-433-8006</td>
<td>Phone: 757-864-2989</td>
</tr>
<tr>
<td><a href="mailto:sdbrown-houston@nasa.gov">sdbrown-houston@nasa.gov</a></td>
<td><a href="mailto:Susan.F.Cooper@nasa.gov">Susan.F.Cooper@nasa.gov</a></td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>Goddard Space Flight Center, MD</strong></th>
<th><strong>Marshall Space Flight Center, AL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Denise Davis</td>
<td>Julie Clift</td>
</tr>
<tr>
<td>Lead, STEM Engagement</td>
<td>STEM Engagement Lead</td>
</tr>
<tr>
<td>Phone: 301-286-4853</td>
<td>Phone: (256) 961-1334</td>
</tr>
<tr>
<td><a href="mailto:denise.a.davis-konopka@nasa.gov">denise.a.davis-konopka@nasa.gov</a></td>
<td><a href="mailto:julie.d.clift@nasa.gov">julie.d.clift@nasa.gov</a></td>
</tr>
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<tr>
<th><strong>Jet Propulsion Laboratory, CA</strong></th>
<th><strong>Stennis Space Center, MS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Ota Lutz</td>
<td>Dr. Nathan Sovik</td>
</tr>
<tr>
<td>Education Specialist</td>
<td>University Affairs Officer</td>
</tr>
<tr>
<td>Phone: (818) 354-3056</td>
<td>Phone: (228) 688-7355</td>
</tr>
<tr>
<td><a href="mailto:Ota.L.Lutz@jpl.nasa.gov">Ota.L.Lutz@jpl.nasa.gov</a></td>
<td><a href="mailto:Nathan.A.Sovik@nasa.gov">Nathan.A.Sovik@nasa.gov</a></td>
</tr>
</tbody>
</table>

*See next page for samples of NASA-unique STEM expertise of NASA Centers and JPL.

**Note:** The most up-to-date contacts at the Centers can be found at:

**NASA Education Program - NASA Field Center Education Directors**
http://www.nasa.gov/offices/education/contacts/cdirect.html

**NASA Education Program - Informal Education**
http://www.nasa.gov/offices/education/contacts/informal.html
Examples (not an exhaustive list) of STEM Expertise Represented at NASA Centers and JPL

<table>
<thead>
<tr>
<th>Center</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Ames</strong></td>
<td>Lunar science, astrobiology, earth sciences, small satellites, technology (information, nano, bio-), space biology, aerospace and thermal protection systems, air traffic management.</td>
</tr>
<tr>
<td><strong>Armstrong</strong></td>
<td>Aerospace technology; airborne remote sensing and science missions; support for the space shuttle program.</td>
</tr>
<tr>
<td><strong>Glenn</strong></td>
<td>Space flight systems, aeronautics propulsion and safety, space propulsion, power and energy conversion systems, nuclear systems, communications, human health in space.</td>
</tr>
<tr>
<td><strong>Goddard</strong></td>
<td>Designs and builds spacecraft, science instruments and new technology to study the Earth, the Sun, our solar system, and the universe.</td>
</tr>
<tr>
<td><strong>JPL</strong></td>
<td>Designs and builds spacecraft, science instruments and new technology to study our solar system, the Earth, the Sun, and the universe; deep space communications.</td>
</tr>
<tr>
<td><strong>Johnson</strong></td>
<td>Human space exploration including astronaut selection and training; spaceflight operations including International Space Station mission operations; and Orion exploration vehicle development.</td>
</tr>
<tr>
<td><strong>Kennedy</strong></td>
<td>Space Launch System, Orion capsule, International Space Station, launch and facility infrastructure, expendable launch vehicles, and Commercial Crew Program.</td>
</tr>
<tr>
<td><strong>Langley</strong></td>
<td>Aviation and space research for aerospace, atmospheric sciences, and technology commercialization.</td>
</tr>
<tr>
<td><strong>Marshall</strong></td>
<td>The Center develops propulsion and space transportation systems, human exploration systems and operations, new materials and manufacturing technology, and scientific spacecraft, instruments, and research.</td>
</tr>
<tr>
<td><strong>Stennis</strong></td>
<td>Rocket propulsion testing and partnering with industry to develop and implement remote sensing technology.</td>
</tr>
</tbody>
</table>

Links to all NASA Centers and JPL: [http://www.nasa.gov/about/orgindex.html](http://www.nasa.gov/about/orgindex.html)
**NASA Headquarters and Shared Services Contacts:**

<table>
<thead>
<tr>
<th><strong>Office of Education</strong></th>
<th><strong>Office of Communications</strong></th>
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<tbody>
<tr>
<td>Diane DeTroye</td>
<td>Nora Normandy</td>
</tr>
<tr>
<td>Director, STEM Engagement Line of</td>
<td>Program Manager, NASA Speaker’s Bureau</td>
</tr>
<tr>
<td>Business</td>
<td>NASA Headquarters</td>
</tr>
<tr>
<td><a href="mailto:diane.d.detroye@nasa.gov">diane.d.detroye@nasa.gov</a></td>
<td>Phone: (202) 358-0871</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Nora.Normandy@nasa.gov">Nora.Normandy@nasa.gov</a></td>
</tr>
<tr>
<td>Lisa Wills</td>
<td>Jim Hull*</td>
</tr>
<tr>
<td>Program Evaluation</td>
<td>Exhibits and Artifacts Manager</td>
</tr>
<tr>
<td>NASA Headquarters</td>
<td>NASA Headquarters</td>
</tr>
<tr>
<td>Phone: (202) 358-1474</td>
<td>Phone: (202) 358-2192</td>
</tr>
<tr>
<td><a href="mailto:Lisa.Wills@nasa.gov">Lisa.Wills@nasa.gov</a></td>
<td><a href="mailto:Jim.Hull@nasa.gov">Jim.Hull@nasa.gov</a></td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Katie V. Wallace</td>
<td></td>
</tr>
<tr>
<td>Director, Educator Professional</td>
<td></td>
</tr>
<tr>
<td>Development Line of Business</td>
<td></td>
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<tr>
<td>NASA Headquarters</td>
<td></td>
</tr>
<tr>
<td>Phone: (256) 617-1297</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:katie.v.wallace@nasa.gov">katie.v.wallace@nasa.gov</a></td>
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<td></td>
</tr>
<tr>
<td><strong>Office of Diversity and Equal Opportunity</strong></td>
<td><strong>Office of Procurement</strong></td>
</tr>
<tr>
<td>David R. Chambers</td>
<td>Theresa M. Stanley</td>
</tr>
<tr>
<td>Program Planning and Evaluation Division</td>
<td>Grants Officer</td>
</tr>
<tr>
<td>NASA Headquarters</td>
<td>NASA Shared Services Center (NSSC)</td>
</tr>
<tr>
<td>Phone: (202) 358-2128</td>
<td>Phone: (228) 813-6196</td>
</tr>
<tr>
<td><a href="mailto:david.r.chambers@nasa.gov">david.r.chambers@nasa.gov</a></td>
<td><a href="mailto:Theresa.M.Stanley@nasa.gov">Theresa.M.Stanley@nasa.gov</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Office of Chief Scientist</strong></td>
<td></td>
</tr>
<tr>
<td>Amy Kaminski</td>
<td></td>
</tr>
<tr>
<td>Senior Policy Advisor</td>
<td></td>
</tr>
<tr>
<td>NASA Headquarters</td>
<td></td>
</tr>
<tr>
<td>Phone: 202.358.2632</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:amy.p.kaminski@nasa.gov">amy.p.kaminski@nasa.gov</a></td>
<td></td>
</tr>
</tbody>
</table>

*Mr. Hull is available to provide advice on NASA exhibits or artifacts that might be touring and related questions. Do not ask Mr. Hull for letters of commitment.*
APPENDIX N. Special Advisory on NASA Grant Budgets and Policy

The government-wide regulations for awarding and administering grants and cooperative agreements with educational and non-profit organizations and State, local, and Indian tribal governments are set forth in the Code of Federal Regulations (CFR) 2 CFR 200 and are supplemented by NASA regulations provided in 2 CFR Part 1800 (see https://prod.nais.nasa.gov/pub/pub_library/srba/index.html).

Proposers are responsible for understanding and complying with the NASA Grant and Cooperative Agreement Manual. Please note, that all the requirements of the Manual related to a particular subject matter/question are applicable and are not limited to any of the noted excerpts below. The following contains answers to frequently asked questions that are provided for your convenience. Unless otherwise specified, experts and provisions provided below are available at: https://prod.nais.nasa.gov/pub/pub_library/srba/index.html.

Question #1: Are there any specific instructions for what to put in the budget narrative?
Answer #1: The following excerpt is from the NASA Guidebook for Proposers:

Required Budget Narrative (Including Personnel and Work Effort and Facilities and Equipment). The Budget Narrative should clearly state the type of award instrument the Recipient anticipates receiving if selected for award (i.e., grant or cooperative agreement). NASA will, however, make the final decision on the award instrument used.

The Budget Narrative shall describe the basis of estimate and rationale for each proposed component of cost, including direct labor, subcontracts/subawards, consultants, other direct costs (including travel), and facilities and equipment. The Proposer shall provide adequate budget detail to support estimates. The Proposer shall state the source of cost estimates (e.g., based on quote, on previous purchases for same or similar item(s), cost data obtained from internet research, etc.) including the company name and/or URL and date if known, but need not include the actual price quote or screen captures from the web. The Proposer shall describe in detail the purpose of any proposed travel in relation to the grant and provide the basis of estimate, including information or assumptions on destination, number of travelers, number of days, conference fees, air fare, per diem, miscellaneous expenses, etc. If destinations are not known, the Proposer should, for estimating purposes, make reasonable assumptions about the potential destination and use historical cost data based on previous trips taken or conferences attended.

A required element of the Budget Narrative is a table of Personnel and Work Effort, summarizing the work effort required to perform the proposed investigation. For grants and cooperative agreements see Section 2.3.12 of the Guidebook for Proposers. The table shall have the names and/or titles of all personnel necessary to perform the proposed effort, regardless of whether those individuals require funding. For each individual, list the planned work commitment to be funded by NASA, per period in fractions of a work year. In addition, include planned work commitment not funded by NASA, if applicable. Where names are not known, include the position, such as postdoc or technician.
The final element of the Budget Narrative is a description of any required facilities and equipment. This section should describe any existing facilities and equipment that are required for the proposed investigation. It shall explain the need for items costing more than $5,000 and describe the basis for estimated cost (i.e., competitive quotes were obtained, justification for sole source purchase, proposed cost based on previous purchases for same or similar item(s), cost data obtained from internet research, etc.).

Proposed costs for purchased facilities, tooling, or equipment shall be entered in the Proposal Cover Page and included in the Budget Details (ref. Section 2.3.10(b)). Proposals submitted via Grants.gov should include a single Facilities and Equipment section as a separate PDF document; it should be uploaded to the Grants.gov application as the “Facilities and Other Resources” document. “Equipment” document should not be uploaded to Grants.gov.

There should be direct and obvious correlation between the items described in the Budget Narrative, those given in the Budget Details, and the figures entered in the Proposal Cover Page/Grants.gov forms.

The following excerpt is from the NASA Guidebook for Proposers, Section 2.3.10(b): In addition to the Budget Narrative, proposers are required to include detailed budgets, including detailed subcontract/subaward budgets, in a format of their own choosing. Regardless of format chosen, the following information shall be included in the Budget Details.

1. Direct Labor (salaries, wages, and fringe benefits): List the number and titles of personnel, amounts of time to be devoted to the grant (level of effort for each position), and rates of pay. The annual salary should be clearly noted for each position. Labor should be clearly broken out from fringe benefits. The fringe benefit rate/percent should be clearly noted on the budget for each labor category for ease of review.

   Important Note: All Recipients are reminded that in accordance with 2 CFR § 200.414, NASA is required to apply the applicable negotiated rate for all grants awarded to the recipient. If fringe benefits comprise part of the applicable negotiated rate, NASA will use this rate for all grants and cooperative agreements awarded to the recipient. Recipients shall not escalate those rates for fringe benefits. If the applicable negotiated rate excludes fringe benefits, recipients may escalate their rates for fringe benefits.

2. Other Direct Costs:
   a. Subcontracts/Subawards: Attachments shall describe the work to be subcontracted/subawarded, estimated amount, recipient (if known), and the reason for subcontracting (e.g., uniquely qualified co-investigator is located at another institution from the proposing institution). Itemized budgets are required for all subcontracts/subawards, regardless of dollar value.
   b. Consultants: Identify consultants to be used and provide the amount of time they will spend on the project and rates of pay to include annual salary, overhead, etc.
c. Equipment: List all facilities and equipment items separately. General-purpose equipment (i.e., personal computers and/or commercial software) valued at or above $5,000 is not allowable as a direct cost unless specifically approved by the NASA Award Officer. Any requested general-purpose equipment purchase valued at or above $5,000 to be made as a direct charge under this award shall include the equipment description, an explanation of how it will be used in the conduct of the research proposed, and a written certification that the equipment will be used exclusively for the proposed research activities and not for general business or administrative purposes. [Ref.: Appendix B, Part (c)(7)].

d. Supplies: Provide general categories of needed supplies, the method of acquisition, and the estimated cost.

e. Travel: Provide a detailed breakout of costs for any proposed travel. Detailed budget data shall include the following:

- Number of people and number of days
- Departure/Arrival cities
- Airfare
- Per diem
- Car rental
- Conference fees (if applicable)
- Miscellaneous Costs (i.e., car rental fuel, airport parking, tolls, etc.).

Note: Every effort should be made to accurately estimate and detail travel costs. Under Federal procurement regulations, missing or minimum data is not acceptable for budget evaluation and award purposes. If destinations are not known at time of proposal preparation, then reasonable assumptions about the potential destination and historical data for previous trips may be used but the preparer is still required to include the same amount of detail listed above. That is, use reasonable assumptions and historical data for destinations and length of stay, however, use current pricing for the applicable categories listed above. If adequate budget detail is not submitted with the proposal then this will delay your award.

f. Other: List and enter the total of direct costs not covered by 2a through 2e.

3. Facilities and Administrative (F&A) Costs: Identify F&A cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If approved audited rates are not available, provide the computational basis for the indirect expense pool and the corresponding allocation base for each proposed rate.

Reference Important Note in paragraph 2.3.10(b)1. above: All budgets shall be prepared using the most current “approved” indirect rates for estimating and award purposes. Proposers shall not use unapproved “future” rates. Failure to do so will cause a delay in receiving your award as the NASA Procurement Office will then have to come back to the Proposer with a request to reduce the proposed rates to the most current “approved” rates. Proposers may charge less than the approved current rates but shall not propose more in anticipation of the rates changing in the future.
4. Other Applicable Costs: Enter total explaining the need for each item and itemized lists detailing expenses within major budget categories. Also enter here the required funding for any Co-Is who cannot be funded through the PI award (e.g. because the PI is at a non-Government organization and a Co-I is at a U.S. Government organization) (see Section 2.3.10(c)(ii)(a)).

5. Subtotal-Estimated Costs: Enter the sum of items 1 through 4.

Less: Proposed Cost Sharing (if any): Neither NSPIRES nor Grants.gov allows for notating cost sharing on the standardized budget form. However, if cost sharing is proposed, it should be discussed in detail in the Budget Narrative. Further, if cost sharing is based on specific cost items, identify each item and amount in the Budget Detail with a full explanation provided in the Budget Narrative.

If an institution of higher education, hospital, or other non-profit organization wants to receive a grant or cooperative agreement, cost sharing is not required. The award would be made in accordance with the requirements of Subparts A and B of 14 CFR Part 1260. Subparts A and B are also applicable to NASA grants and cooperative agreements awarded to commercial firms which do not involve cost sharing. This does not prohibit voluntary cost sharing. NASA may accept cost sharing from any type of organization if it is voluntarily offered. Reference 2 CFR §200.306 (Cost Sharing or matching). If a commercial organization wants to receive a grant or cooperative agreement, cost sharing is required unless the commercial organization can demonstrate that it does not expect to receive substantial compensating benefits for performance of the work. If this demonstration is made, cost sharing is not required but may be offered voluntarily. Reference also 2 CFR §1800.922 and 14 CFR §1274.204, (Costs and Payments), paragraph (b), Cost Sharing.

Cost sharing is not required when a commercial organization receives a contract, but it may be offered voluntarily.

6. Total Estimated Costs: Enter the total amount of funding requested from the Government.

>>>End of Excerpt/Provision>>>
**Answer #3:** Generally it belongs to the awarded institution unless NASA through the NSSC makes different provisions at the time of actual award. Since recipients are being provided federal funding, NASA will exercise its rights appropriately.

**Question #4:** Can we use NASA funds to buy food as part of project’s implementation strategy, such as at our workshops for adults or to ensure the safety or participation by youth?

**Answer #4:** There are cases where the purchase of food is permissible. For example, if the primary purpose of the workshop is to disseminate technical information beyond the recipient and is necessary and reasonable for the performance of the grant, allowable costs may include the cost of meals and refreshments. During the final business review of a selected proposal, the NSSC will evaluate whether any proposed food costs are reasonable. See CFR200.432. ([https://www.gpo.gov/fdsys/pkg/CFR-2014-title2-vol1/pdf/CFR-2014-title2-vol1-sec200-432.pdf](https://www.gpo.gov/fdsys/pkg/CFR-2014-title2-vol1/pdf/CFR-2014-title2-vol1-sec200-432.pdf))
APPENDIX O. Guidance on Resolution for Pre-Submission Eligibility Questions

Neither NSPIRES nor Grants.gov can prevent any entity of any status (eligible or non-eligible) from submitting a proposal in response to this NRA. Unlike some other federal or private grant-making agencies, the key personnel working with this NRA do not pre-review proposal ideas nor pre-determine eligibility prior to final proposal submissions.

NASA cannot provide case-by-case advice to a potential proposer regarding whether or not any organization should submit a proposal to this NRA. The reason NASA does not provide pre-submission confirmation of organization eligibility is that there are three eligibility criteria: 1) institutional or organizational, 2) PI, and 3) technical content area. For example, there may be cases where an organization may be eligible to apply through the creation of a new DUNS number or a +4DUNS, but does not have a position or person that can meet the PI eligibility criteria that requires ability to attest to the applicant entity’s fiscal health.

NASA will review eligibility issues only for full proposals available for review via NSPIRES or Grants.gov. NASA will not transcribe ineligible proposals submitted via Grants.gov. NASA expects pre-submission eligibility issues to be raised to the proposing organization’s highest leadership; e.g., Boards, AOR, legal counsel, chief financial manager, President, etc., who are qualified to certify an organization’s type and PI status for federal funding. Please carefully review Section 3. Eligibility with an AOR, legal counsel and a proposing agency’s leadership to determine whether or not the entity should seek to propose as a lead institution, as a subaward, or both.

NASA does not discuss formally or informally or provide guidance or advice to an organization regarding how to manage a proposal submission to this NRA. NASA also does not assist ineligible organizations that want help to identify an eligible partner that can submit a proposal. Furthermore, NASA does not assist eligible proposers to find non-NASA partners or assets.

Eligible proposals shall focus on at least one (1) of the five broad technical topic areas that were identified by the NASA Authorization Act of 2005 for museums. This NRA does not further define those broad areas other than through the material submitted by each cooperating NASA organizational unit because each NASA mission uses various experts in fields including but not limited to: the physical, natural, and biological (including medical) sciences, engineering, space technology, aeronautics, economics, sociology, and communications that are concerned with or likely to improve life on earth; or the understanding, assessment, development, and current or potential utilization of space, including but not limited to: commercial crew and cargo, International Space Station, etc.
APPENDIX P. Performance Measurement and Evaluation: Definitions and Relationships

Program Performance Assessment

Both the executive branch and congressional committees need evaluative information to help them make decisions about the programs they oversee—information that tells them whether and why a program is working well or not. Rescuing the Government Performance and Results Act of 1993 (GPRA), Congress expressed frustration that executive and congressional decisionmaking was often hampered by the lack of good information on the results of federal program efforts. To promote improved federal management and greater efficiency and effectiveness, GPRA established a governmentwide requirement that agencies set goals and report annually on performance.

Many analytic approaches have been employed over the years by the agencies and others to assess the operations and results of federal programs, policies, activities, and organizations. Most federal agencies now use performance measures to track progress toward goals, but few seem to regularly conduct multiph program evaluations to assess their programs’ impact or learn how to improve results. Individual evaluation studies are designed to answer specific questions about how well a program is working, and GPRA explicitly encourages a complementary role for these types of program assessments. The GPRA Modernization Act of 2010 aims to improve program performance by requiring agencies to identify priority goals, assign officials responsibility for achieving them, and review progress quarterly. Complete and accurate information on how well programs are working and why will be key to its success.

This glossary describes and explains the relationship between two common types of systematic program assessment: performance measures and program evaluation. Based on GAO publications and program evaluation literature, it was

Nancy R. Kingsbury, Managing Director
Applied Research and Methods

GAO-11-440FS
United States Government Accountability Office
Glossary
PERFORMANCE MEASUREMENT AND EVALUATION

Definitions and Relationships

Nancy R. Kingsbury, Managing Director
Applied Research and Methods

May 2011

United States Government Accountability Office
Glossary

PERFORMANCE MEASUREMENT AND EVALUATION

Definitions and Relationships

Nancy R. Kingsbury, Managing Director
Applied Research and Methods
### Types of Program Performance Assessment

<table>
<thead>
<tr>
<th>Performance Measurement</th>
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<tbody>
<tr>
<td>Performance measurement is the ongoing monitoring and reporting of program accomplishments, particularly progress toward preestablished goals. It is typically conducted by program or agency management.</td>
</tr>
<tr>
<td>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).</td>
</tr>
<tr>
<td>A “program” may be any activity, project, function, or policy that has an identified purpose or set of objectives.</td>
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<table>
<thead>
<tr>
<th>Program Evaluation</th>
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<tr>
<td>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.</td>
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<tr>
<td>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. Four main types can be identified, all of which use a mixture of program performance, along with other information, to learn the benefit of a program or how to improve it.</td>
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### Relationship between Performance Measurement and Program Evaluation

<table>
<thead>
<tr>
<th>Different Focus</th>
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<tbody>
<tr>
<td>Performance measurement focuses on whether a program has achieved its objectives, expressed as measurable performance standards. Program evaluations typically examine a broader range of information on program performance and its context than is feasible to monitor on an ongoing basis.</td>
</tr>
<tr>
<td>Depending on their focus, evaluations may examine aspects of program operations (such as process evaluation) or factors in the program environment that may impede or contribute to its success, to help explain the linkages between program inputs, activities, outputs, and outcomes. Alternatively, evaluations may assess the program’s effects beyond its intended objectives, or estimate how much progress toward achieving outcomes of the program has been made.</td>
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<table>
<thead>
<tr>
<th>Different Use</th>
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<tr>
<td>Both forms of assessment aim to support resource allocation and other policy decisions to improve service delivery and program effectiveness. But performance measurement, because of its ongoing nature, can serve as an early warning system to management and as a vehicle for improving accountability to the public.</td>
</tr>
<tr>
<td>A program evaluation’s typically more in-depth examination of program performance and context allows for an overall assessment of whether the program works and identifies any of its components that may improve its results.</td>
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### Types of Program Evaluation

<table>
<thead>
<tr>
<th>Process (or Implementation) Evaluation</th>
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<tbody>
<tr>
<td>This form of evaluation assesses the extent to which a program is operating as it was intended. It typically assesses program activities’ conformance to statutory and regulatory requirements, program design, and professional standards or customer expectations.</td>
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<table>
<thead>
<tr>
<th>Outcome Evaluation</th>
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<tbody>
<tr>
<td>This form of evaluation assesses the extent to which a program achieves its outcome-oriented objectives. It focuses on outputs and outcomes (including unintended effects) to judge program effectiveness but may also assess program process to understand how outcomes are produced.</td>
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<thead>
<tr>
<th>Impact Evaluation</th>
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<tr>
<td>Impact evaluation is a form of outcome evaluation that assesses the net effect of a program by comparing program outcomes with an estimate of what would have happened in the absence of the program. This form of evaluation is employed when external factors are known to influence the program’s outcomes, in order to isolate the program’s contribution to achievement of its objectives.</td>
</tr>
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<tr>
<th>Cost-Benefit and Cost-Effectiveness Analyses</th>
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<tr>
<td>These analyses compare a program’s outputs or outcomes with the costs (resources expended) to produce them. When applied to existing programs, they are also considered a form of program evaluation. Cost-effectiveness analysis assesses the cost of meeting a single goal or objective and can be used to identify the least costly alternatives for meeting that goal. Cost-benefit analysis aims to identify all relevant costs and benefits, usually appraised in dollar terms.</td>
</tr>
</tbody>
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APPENDIX Q. Glossary of Abbreviations, Acronyms and Definitions

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFRC</td>
<td>NASA Armstrong Flight Research Center, Edwards, CA</td>
</tr>
<tr>
<td>AOR</td>
<td>Authorized Organization Representative</td>
</tr>
<tr>
<td>ARC</td>
<td>NASA Ames Research Center, Moffett Field, CA</td>
</tr>
<tr>
<td>ARMD</td>
<td>NASA Aeronautics Research and Mission Directorate</td>
</tr>
<tr>
<td>ASE</td>
<td>Authentic STEM Experience</td>
</tr>
<tr>
<td>CAGE</td>
<td>Contractor and Government Entity Code</td>
</tr>
<tr>
<td>CBI</td>
<td>Confidential Business Information</td>
</tr>
<tr>
<td>CCC</td>
<td>NASA’s Communications Coordinating Council</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>Co-I, Co-PI</td>
<td>Co-Investigator, Co-Principal Investigator</td>
</tr>
<tr>
<td>COI</td>
<td>Conflict of Interest</td>
</tr>
<tr>
<td>CP4SMPVC</td>
<td>Competitive Program for Science Museums, Planetariums, and NASA Visitor Centers</td>
</tr>
<tr>
<td>DAAE</td>
<td>Deputy Associate Administrator for Education</td>
</tr>
<tr>
<td>DMP</td>
<td>Data Management Plan</td>
</tr>
<tr>
<td>DUNS</td>
<td>Data Universal Numbering System; a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of over 100 million businesses worldwide</td>
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<tr>
<td>DVI</td>
<td>Digital Visual Interface</td>
</tr>
<tr>
<td>EO</td>
<td>Equal Opportunity</td>
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<tr>
<td>EPD</td>
<td>Educator Professional Development</td>
</tr>
<tr>
<td>EPSCoR</td>
<td>Experimental Program to Stimulate Competitive Research</td>
</tr>
<tr>
<td>F&amp;A</td>
<td>Facilities and Administrative</td>
</tr>
<tr>
<td>FAQ</td>
<td>Frequently Asked Questions</td>
</tr>
<tr>
<td>FAR</td>
<td>Federal Acquisition Regulation</td>
</tr>
<tr>
<td>FFRDC</td>
<td>Federally Funded Research and Development Center</td>
</tr>
<tr>
<td>FMR</td>
<td>Federal Management Regulation</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year (October–September; i.e., the Federal Fiscal Year)</td>
</tr>
<tr>
<td>GAO</td>
<td>Government Accountability Office</td>
</tr>
<tr>
<td>GCAM</td>
<td>NASA Grant and Cooperative Agreement Manual</td>
</tr>
</tbody>
</table>
GLSC  Great Lakes Science Center
GRC  NASA Glenn Research Center, Cleveland, OH
GSFC  NASA Goddard Space Flight Center, Greenbelt, MD
HEOMD  NASA Human Exploration and Operations Mission Directorate
HHS OHRP  Department of Health and Human Services Office of Human Research Protection
IEI  Informal Education Institution(s)
IRB  Institutional Review Board
ISS  International Space Station
HBCUs  Historically Black Colleges and Universities
HSI  Hispanic Serving Institutions
JPL  Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
JSC  NASA Johnson Space Center, Houston, TX
KSC  NASA Kennedy Space Center, FL
KSCVC  Kennedy Space Center Visitor Complex
LaRC  NASA Langley Research Center, Hampton, VA
MA  Museum Alliance
MD  Mission Directorate
MSFC  NASA Marshall Space Flight Center, Huntsville, AL
MSI  Minority Serving Institution
MUREP  Minority University Research and Education Program
NOAA  National Oceanic and Atmospheric Administration
NOI  Notice of Intent
NPD  NASA Policy Directive
NRA  NASA Research Announcement
NSPIRES  NASA Solicitation and Proposal Integrated Review and Evaluation System
https://nspires.nasaprs.com
NSSC  NASA Shared Services Center, Stennis, MS https://www.nssc.nasa.gov
NSTC  National Science and Technology Council
OCI  Organizational Conflicts of Interest
ODEO  NASA Office of Diversity and Equal Opportunity
OE  NASA Office of Education
DEFINITIONS

American Indian or Alaska Native: A person having origins in any of the original peoples of North and South America (including Central America) who maintains cultural identification through tribal affiliation or community attachment.
Asian: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Black or African-American: A person having origins in any of the Black racial groups of Africa.

Hispanic or Latino: A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin regardless of race.

Native Hawaiian or Other Pacific Islander: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Targeted Disabled: A person having a physical or mental impairment that substantially limits one or more major life activities; who has a record of such impairment or who is regarded as having such impairment. (See the LEAD (Leadership for the Employment of Americans with Disabilities) pages at the U.S. Equal Employment Opportunity Commission, http://www.eeoc.gov/eeoc/initiatives/lead/why.cfm).

White: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Underrepresented Minority: Refers to persons from racial and ethnic groups whose enrollment in STEM education or participation in STEM professions is much smaller than that group’s representation in the general population. African Americans, Hispanics/Latinos, and Native Americans and Pacific Islanders currently fit this definition.

APPENDIX R. Other Opportunities
Unsolicited, Solicited, No-Exchange-of-Funds Partnerships-with-Public-or-Private-Entities, or Non-Domestic Proposals.

NASA is authorized to accept to review proposals only under one of two conditions: a proposal shall either be 1) presented as an unsolicited proposal; or 2) submitted in response to a formal competitive solicitation (e.g. this NRA is an example of a competition). Basic information (which will vary by agency) about who is eligible for a federal grant can be found on Grants.gov specifically here: http://www.grants.gov/web/grants/applicants/applicant-eligibility.html.

Further, NASA Education engages in no-exchange-of-funds relationships under the authority of NASA’s Space Act, the law that established NASA as a federal agency. Preparing and submitting a proposal is time consuming, particularly for organizations unfamiliar with NSPIRES. Proposers shall consult with key NASA offices to prevent an unnecessary submission as non-competitive or unsolicited proposal.

1) Unsolicited Proposals for grants, contracts or cooperative agreements
While NASA encourages the submission of unique and innovative unsolicited proposals, the Office of Education at NASA does not have discretionary funds necessary to support unsolicited efforts. NASA’s Office of Procurement in Washington, DC has published GUIDANCE FOR THE PREPARATION AND SUBMISSION OF UNSOLICITED PROPOSALS REVISED MAY 2016 EDITION available at: http://prod.nais.nasa.gov/pub/publibrary/unSol-Prop.html

2) Solicited (Competitive) calls for proposals
If not already registered, please review and register with NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES). This web-based system supports the release of solicitation announcements through the peer review and selection processes. NASA's NSPIRES website provides information about NASA research and education announcements, proposals selected for closed/past solicitations, and results of NASA research. NSPIRES information is intended to assist you in your proposal preparation. In order to create and submit a proposal to NASA, you and your institution shall be registered with NSPIRES. For automatic notification of competitive opportunities for scientific and technical research, program management and administration, and other announcements, please register with NSPIRES at http://nspires.nasaprs.com/external/.

NASA also has a Vendor Data Base (NVDB) not specific to education but open to all types of entities. This database is open to all vendors, both large and small, for and not for profit included, who wish to do business with NASA. You can post your capability briefs in any
format, sign up for email messages that will give you information on Source Sought Notices, Requests for Information (RFI) or Request for Proposals (RFP) along with a quarterly newsletter.

All NASA employees will use this database for market research, communication, and educating the NASA industrial base about the requirements of the NASA Centers. For the full site visit:

https://vendors.nvdb.nasa.gov/index.cfm?fuseaction=Vendor.challengescreen

3) 4) Submission For No-Exchange of Funds Collaborations
NASA is seeking collaborators and partners interested in working toward mutually beneficial goals. The agency is committed to sharing the excitement of NASA's space-based missions and inspiring students of all ages to pursue studies in science, technology, engineering and mathematics. NASA is receptive to a broad range of possibilities from creative organizations with wide-ranging areas of expertise. All categories of domestic entities, including U.S. federal government agencies, are eligible to respond; proposals are submitted through NSPIRES and reviewed on a rolling basis per the specifications of the current competitive call For High Impact / Broad Implementation STEM Education Partnerships, #EDUCATION01SP16.

4) Submissions from Non-Domestic Entities
This NRA does not accept or review proposals from entities that are not classified as a US entity. However, the mission of the Office of International and Interagency Relations (OIIR) is to provide executive leadership and coordination for all NASA international activities and partnerships and for policy interactions between NASA and other U.S. Executive Branch offices and agencies. OIIR serves as the principal Agency liaison with the National Security Council, the Office of Science and Technology Policy, the Department of State, and the Department of Defense. OIIR also directs NASA’s international relations; negotiates cooperative and reimbursable agreements with foreign space partners; provides management oversight and staff support of NASA’s advisory committees, commissions and panels; and manages the NASA Export Control Program and foreign travel by NASA employees.

For a view of NASA’s International Cooperation please visit:
https://oiir.hq.nasa.gov/globablreach2014.pdf. There may be opportunities with some of the world’s other space agencies. To find your closest non-NASA space agency, please visit:

Submissions from non-domestic entities will be declined or disqualified as noncompliant with this NRA.