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## **A Cooperative Agreement Notice (CAN)**

### **Aerospace Education Services Project (AESP) Implementation Mini-Grants**

Release Date:	May 4, 2009
Proposals Due:	October 9, 2009
Anticipated Award Date:	November 20, 2009
Program Website:	<a href="http://www.spacegrant.org/aesp/">http://www.spacegrant.org/aesp/</a>

## Table of Contents

<b>1. Summary .....</b>	<b>1</b>
<b>2. Eligibility.....</b>	<b>1</b>
<b>3. Funding Opportunity Description .....</b>	<b>1</b>
3.1. Introduction.....	1
3.2. Responsibilities of the Recipient.....	2
3.3. Responsibilities of the Aerospace Education Services Project Staff .....	3
3.4. Documentation/Deliverables.....	4
3.5. Period of Performance.....	4
3.6. Other Information.....	4
<b>4. Proposal and Submission Information .....</b>	<b>5</b>
4.1. Proposal Format .....	5
4.2. Budget .....	5
4.3. Submission Instructions.....	6
<b>5. Award Information .....</b>	<b>6</b>
<b>6. Contacts .....</b>	<b>6</b>
<b>Appendix A: Budget Summary .....</b>	<b>7</b>
<b>Appendix B: Standard Education Grant/Cooperative Agreement.....</b>	<b>9</b>
<b>Appendix C: Certifications and Assurances .....</b>	<b>10</b>

## 1. Summary

The Aerospace Education Services Program (AESP) desires to identify and provide seed funding to new and existing programs that will support AESP by adapting an AESP provided curriculum *Toolkit* to the standards and needs of the recipient's state and implementing exemplary, sustainable, pre-service or in-service educator, professional development courses based upon this curriculum.

The Foundation anticipates that ten to twenty awards will be made under this CAN. The total pool of funds available to award is \$300,000. The Foundation anticipates that it will reissue this CAN on a yearly basis.

## 2. Eligibility

Competition is open to individuals qualified to serve as principal investigators at colleges, universities and non-profit organizations that are members in good standing of the Space Grant program as of the proposal due date listed in this announcement. For a full list of eligible institutions please visit the announcement website.

Historically Black Colleges and Universities, Tribal Colleges and other minority serving educational institutions whom are members of the Space Grant program are particularly encouraged to apply. Proposals from women, members of under-represented minorities groups, and persons with disabilities are highly encouraged.

## 3. Funding Opportunity Description

### 3.1. Introduction

As we begin the second century of flight and a half a century of space exploration, our Nation maintains its commitment to excellence in science, technology, engineering, and mathematics (STEM) education to ensure that the next generation of explorers and innovators is fully prepared to join our workforce with contributions to national needs. As identified in the National Academies report, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, it is essential that the United States increase America's talent pool by vastly improving K-12 science and mathematics education.

NASA is taking a leading role to inspire interest in STEM disciplines as few other organizations can through its unique mission, workforce, facilities, research, and innovations. The agency is also taking a leading role to make significant impacts in engaging underserved and underrepresented communities in STEM. Furthermore it is taking bold steps at the K-12 grade levels to prepare the next generation of explorers.

The Aerospace Education Services Project (AESP), as one of NASA's Elementary and Secondary Education Programs, is providing opportunities in unique NASA learning experiences to teachers, students, administrators, and families. AESP is designed to serve as a major link in the student pipeline used to address the Education Goals from NASA's 2006 Strategic Plan. The NASA Education Strategic Coordination Framework: A Portfolio Approach (<http://education.nasa.gov/about/strategy>) identifies three outcomes for the Agency's education Goals. The Elementary and Secondary Education program focuses primarily on Outcome 2.

- Outcome 2: Attract and retain students in the STEM disciplines – To compete effectively for the minds, imagination, and career ambition of America's young people. NASA will focus on engaging and retaining students in STEM education programs to encourage their pursuit of

educational disciplines critical to NASA's future engineering, scientific, and technical missions.

The Aerospace Education Services Project's primary focus is as a professional development program that serves the elementary and secondary education community by providing in-service training for teachers, pre-service training for university students, faculty workshops, classroom demonstrations, distance learning events, and identification of appropriate classroom resources. The program's educator specialists have extensive teaching experience and are well-trained and well-equipped in STEM content. They are knowledgeable of national science, mathematics, and technology standards, research-based pedagogies and proficient in the use of educational technology tools.

AESP Education Specialists regularly visit schools in all 50 states and U.S. territories, to engage teachers and students in projects and activities relevant to NASA's mission. It is anticipated that Education Specialists will work closely with projects funded under this CAN. Proposers have the option of consulting with Specialists during the development of their proposal and including specific language about how Specialists will be used, although this is not required. Once award decisions are made, each funded project will be assigned a liaison Education Specialist to assist, where appropriate, in activities such as teacher recruitment, adaptation of existing curriculum materials to address specific state standards, and school-based follow-up that supplements recipient-provided coursework.

Proposers may also request AESP Specialist support in teaching the new course, although this is not required. AESP services will be provided at no cost to funded projects. However, proposers should note the program intends to offer a new solicitation on a new theme each year, and the AESP workforce is finite in number. Proposals must be able to demonstrate the potential to be sustainable in future years, where the participation of AESP Education Specialists is largely limited to school-based follow-up.

More information about the Aerospace Education Services Project is available at the project's website: <http://csats.psu.edu/aesp.htm>. To learn more about AESP services that can be included as part of a proposal, the AESP Project Assistant who serves your region can connect you with an Education Specialist: <http://csats.psu.edu/contacts.htm>

The overall objective of this solicitation is to provide customized professional development opportunities aligned to state standards and needs. These professional development opportunities will educate in-service and pre-service teachers allowing them to gain rigorous and relevant content understanding and how it relates to NASA research and development for teaching in the STEM disciplines.

### **3.2. Responsibilities of the Recipient**

Recipients of these awards will be responsible for the following:

1. Development of a new or the substantive improvement of an existing, high quality, pre/in-service, course (or series of workshops) designed to provide exemplary professional development activities to its participants. Courses must have the following characteristics.
  - a. The subject-matter focus of the course must be related to one of the ASEP developed *Toolkits*. The specific topic of the course should be relevant to the needs

- of teachers in the state(s) that will be served by the course, and it is not required that the course content be narrowly limited to the annual theme. (For example, the Lunar Exploration *Toolkit* might be utilized in courses like, “Robotic Exploration,” “Planetology,” or “The Earth-Moon-Sun System.”)
- b. The course should utilize, as appropriate, materials from an AESP-developed *Toolkit*.
  - c. The course should include at least 30 hours of interaction with participating teachers. This interaction may include but not be limited to: classroom instruction, hands-on activities, interactive activities with scientists and engineers, and distance learning.
  - d. Participants must be pre/in-service educators of STEM (Science, Technology, Engineering, and Mathematics) subjects or others whose primary responsibility is the training of in-service educators. Teachers of multiple subjects are eligible, such as elementary teachers and special educators.
  - e. Participants will be required to participate in an AESP longitudinal tracking program administered by AESP staff, in order to provide NASA with mandated evaluation data.
  - f. Undergraduate or graduate credit for the participants, although not required, is highly encouraged. Incorporation of the activity into an undergraduate or graduate degree program is especially encouraged.
2. Implementation of the first year of the developed course or workshops.
  3. Identification and implementation of a realistic sustainability plan for post award continuation of the course or workshops.
  4. Recruitment of course or workshop participants.
  5. Program evaluation during the period of the award.
  6. Submission of reports as outlined in section 3.4 Documentation/Deliverables
  7. Proposals from non-academic institutions must demonstrate how their program facilitates strong ties between university faculty and the course participants.

### **3.3. Responsibilities of the Aerospace Education Services Project Staff**

The AESP Staff will be responsible for the following:

1. Each year, AESP will assemble a *Toolkit* of open-source materials related to the annual theme. The *Toolkit* provides, in one place, a rich collection of NASA and non-NASA curricula, activities, visualizations, videos, datasets, and other materials, as well as evaluative notes and suggestions for using and adapting those materials in K-12 teacher professional development. The *Toolkits* will be available on the AESP website (<http://csats.psu.edu/aesp/>).
2. Post award evaluation of the project.
3. Longitudinal tracking of the participants of the implemented classes or workshops.

4. Additional Items. The level of support provided by the AESP staff for the following items will be determined by the AESP program office in conjunction with the AESP Education Specialists.
  - a. Assistance in the adaptation of the *Toolkit* instructional materials to state standards.
  - b. Assistance in the recruitment of class or workshop participants.
  - c. Post award support of class or workshop participants which could include school visits, workshops, and other support items.

To learn more about AESP services that can be included as part of a proposal, the AESP Project Assistant who serves your region can connect you with an Education Specialist: <http://csats.psu.edu/contacts.htm>

### **3.4. Documentation/Deliverables**

The award recipients shall provide concise quarterly reports during the period of the award and a final report. Quarterly reports are due within 15 days of the end of each quarter of the award and the final report is due within 30 days of the competition of the award.

#### Quarterly Progress Reports

The quarterly progress reports must be succinct and contain at least the following items:

1. Description of the work performed during the quarter.
2. Description of the work to be performed during the next quarter.
3. Actual vs. Projected expenses for the quarter.
4. Projected expenses for the next quarter.
5. Status report concerning the sustainability plan.

#### Final Report

The final report must be succinct and contain at least the following items:

1. Narrative description of the project.
2. Numbers and makeup of class or workshop participants.
3. Contact information of all class or workshop participants.
4. Submission of program evaluation data to the AESP assessment tool.
5. Details on the alignment of the materials to state educational standards and needs.
6. Actual vs. Projected expenses for each quarter of the project.
7. Status report concerning the sustainability plan.
8. Copy of all materials delivered to the participants.

### **3.5. Period of Performance**

The period of performance for the award may begin as early as January 1, 2010 and may be for any length up to 24 months.

### **3.6. Other Information**

1. Proposal submissions are limited to one proposal per principal investigator per funding cycle.
2. Principal Investigators are not eligible to submit proposals on an annual theme that they have been previously funded to implement.

## 4. Proposal and Submission Information

### 4.1. Proposal Format

Proposals must be single-spaced with a type size of at least 11 points and margins of at least one inch on all sides. Proposal page size may be no greater than 8.5 inches by 11 inches. Proposals exceeding the page limits specified below will not be considered.

Proposals should contain the following items:

1. Cover Page (1 page)

The cover page must include the following items: Project title, proposed dates of service, PI name and contact information, institutional signatures, name and contact information for contracting personnel, and date of submission. The cover page must be the first page of the submitted proposal. If the proposing institution chooses to submit a cover letter for the proposal this cover letter **will** be included in the page count of the proposal body and **must not precede** the proposal cover page.

2. Proposal Body (Up to 4 pages)

The proposal body must include the following items:

- a. Program Description
- b. Goals and Objectives of the Program
- c. Sustainability Plan
- d. Awareness Plan
- e. Evaluation Plan
- f. Principal Investigator and major project staff expertise

3. Budget Summary and Narrative (not included in page count)

4. Resume Material (2 pages per resume, limited to 2 resumes)

Include a resume for the Principal Investigator. One additional resume may be included for major project staff. Each resume is limited to two pages.

### 4.2. Budget

Complete the budget form and narrative found in Appendix A: Budget Summary.

The total proposal budget may not exceed \$30,000. Up to \$15,000 may be allocated for curriculum adaptation and class or workshop implementation. These costs include but are not limited to personnel time, workshop materials/supplies, travel, etc. Up to \$15,000 may be allocated for tuition supplements for class or workshop participants. Tuition fees charged to course participants must be customary and reasonable as defined by the host institution.

Upon award, re-budgeting between these two major categories without prior written consent of the sponsor is expressly prohibited. In the event that the Principal Investigator secures matching funds in the form of tuition waivers or tuition payments the PI will be allowed to re-budget funds between these two categories in an amount not to exceed the matching tuition funds that were received. Prior sponsor approval for this re-budget is required. Tuition funds received from course participants, from scholarships or fellowships, or tuition paid by course participant's employers are not considered matching funds.

Due to the purely educational nature of this award, it is strongly encouraged that institutions waive or significantly reduce indirect costs.

Cost sharing is encouraged but not required. Unrecovered indirect costs may be used as cost sharing.

#### **4.3. Submission Instructions**

All proposals must be submitted electronically via the Foundation's proposal submission system at <https://secure.spacegrant.org/proposals/aesp/> no later than midnight Pacific Time on the due date listed on the title page of this announcement. Hard copy submissions are not required and will not be accepted. Proposing Principal Investigators may register with the system at any time. Submissions must be made under the Principal Investigators registration with the system and not via a centralized registration for the submitting organization. Proposal packets must be comprised of a single PDF file that contains all required elements including appropriate institutional signatures.

Supplemental materials not specifically requested in this announcement will not be considered in the review process. Late submissions will not be accepted and incomplete or non-compliant submissions will not be evaluated.

#### **5. Award Information**

The Foundation anticipates that ten to twenty awards will be made under this CAN. The total pool of funds available to award is \$300,000. The Foundation anticipates that it will reissue this CAN on a yearly basis.

For this solicitation, the provisions contained in the NASA Grant and Cooperative Agreement Handbook (NPR 5800.1) apply. Proposals from entities outside the United States will not be considered. Recipients of NASA cooperative agreements may not be paid a profit. The provisions contained in Part 1260 of the Handbook apply. Additional information on Cooperative Agreements with NASA may be found at: <http://ec.msfc.nasa.gov/hq/grcover.htm>

The Foundation reserves the right to make no awards under this cooperative agreement notice and, in the absence of program funding or for any other reason to cancel this CAN by having a notice published on the announcement website. The Foundation assumes no liability for canceling the CAN or for anyone's failure to receive actual notice of the cancellation. Cancellation may be followed by issuance of a revised CAN.

#### **6. Contacts**

Questions or comments regarding this announcement may be directed to:

Mark Fischer  
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[fischer@spacegrant.org](mailto:fischer@spacegrant.org)  
202-536-3030  
<http://www.spacegrant.org/>

For questions or comments regarding the Aerospace Education Services Program or to learn more about AESP services that can be included as part of a proposal, the AESP Project Assistant who serves your region can connect you with an Education Specialist: <http://csats.psu.edu/contacts.htm>

**Appendix A: Budget Summary**

	From _____	To _____
	Funds Requested from Sponsor	Proposed Cost Sharing (if any)
1. Direct Labor	\$ _____	_____
2. Other Direct Costs:		
a. Subcontracts	\$ _____	_____
b. Consultants	\$ _____	_____
c. Equipment	\$ _____	_____
d. Supplies	\$ _____	_____
e. Travel	\$ _____	_____
f. Other	\$ _____	_____
3. Indirect Costs	\$ _____	_____
4. Other Applicable Costs	\$ _____	_____
5. Total	\$ _____	_____
6. Total Estimated Costs	\$ _____	_____

## Budget Narrative

If the proposal contains cost sharing separate budget narratives should be included for the funds requested from the sponsor and the proposed cost sharing.

1. **Direct Labor** (salaries, wages, and fringe benefits): Should list numbers and titles of personnel, amount of time to be devoted to the grant, and rates of pay.
2. **Other Direct Costs:**
  - a. **Subcontracts** - Describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting this effort.
  - b. **Consultants** - Identify consultants to be used, why they are necessary, the time they will spend on the project, and rates of pay (not to exceed the equivalent of the daily rate for Level IV of the Executive Schedule, exclusive of expenses and indirect costs.)
  - c. **Equipment** - List separately and explain the need for items costing more than \$1,000. Describe basis for estimated cost. General purpose equipment is not allowable as a direct cost unless specifically approved by the sponsor.
  - d. **Supplies** - Provide general categories of needed supplies, the method of acquisition, estimated cost. (For Example: Office Supplies, Lab Supplies, etc.)
  - e. **Travel** - List proposed trips individually and describe their purpose in relation to the award. Also provide dates, destination, and number of people where known. (For example: Airfare, Hotel, Per Diem, Registration, Car Rental, etc.)
  - f. **Other** - Enter the total direct costs not covered by 2.a through 2.e. Attach an itemized list explaining the need for each item and the basis for the estimate.
3. **Indirect Costs**
4. **Other Applicable Costs** - Enter the total of other applicable costs with an itemized list explaining the need for each item and basis for the estimate.
5. **Total** – The sum of lines 1 through 4.
6. **Total Estimated Costs** – The sum of the funds requested from the sponsor and the proposed cost sharing (if any)

**Appendix B: Standard Education Grant/Cooperative Agreement**

The following provisions of the Federal Code of Regulations are incorporated by reference

REFERENCE	TITLE
§ 1260.21	Compliance with OMB Circular A-110
§ 1260.22	Technical Publications and Reports
§ 1260.23	Extensions
§ 1260.24	Termination and Enforcement
§ 1260.25	Change in Principal Investigator or Scope
§ 1260.26	Financial Management
§ 1260.27	Equipment and Other Property
§ 1260.28	Patent Rights
§ 1260.29	Reserved
§ 1260.30	In full text
§ 1260.31	National Security
§ 1260.32	Nondiscrimination
§ 1260.33	Subcontracts
§ 1260.34	Clean Air and Water
§ 1260.35	Investigative Requirements
§ 1260.36	Travel and Transportation
§ 1260.37	Safety
§ 1260.38	Drug-Free Workplace
§ 1260.39	Buy American Encouragement
§ 1260.40	Investigation of Research Misconduct

Provisions listed above are contained in the Code of Federal Regulation (14 CFR Part 1260). The CFR can be accessed electronically at: <http://www.gpoaccess.gov/cfr/index.html> or copies are available in most libraries and for purchase from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Provisions incorporated by reference have the same force and effect as if they were given in full text. The full text provision can be found via the NASA Grant and Cooperative Agreement Handbook web site: <http://ec.msfc.nasa.gov/hq/grcover.htm>. OMB Circulars referenced in the provisions can be assessed electronically at: <http://www.whitehouse.gov/WH/EOP/OMB/html/circular.html> or may be obtained from the Office of Administration, Publications Unit, New Executive Office Building, Washington, D.C. 20503. An index of existing OMB Circulars is contained in 5 CFR 1310.

## **Appendix C: Certifications and Assurances**

### **Assurance of Compliance With The National Aeronautics and Space Administration Regulations Pursuant to Nondiscrimination in Federally Assisted Programs**

#### **Certification Regarding Debarment, Suspension, and Other Responsibility Matters-- Primary Covered Transactions**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participant's responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160 - 19211).

#### **Certification Regarding Lobbying for Contracts, Grants, Loans, and Cooperative Agreements**

This certification is required under 34 CFR Part 82,"New Restrictions on Lobbying

Applicants should refer to the regulations cited above to determine the certification to which they are required to attest. Applicants should also review the instructions for certification included in the regulations before completing these forms. Signature of these forms provides for compliance with certification requirements under 34 CFR Part 82, "New Restrictions on Lobbying", and 34 CFR Part 85, Government-wide Debarment and Suspension (Nonprocurement). The certifications shall be treated as a material representation of fact upon which reliance will be placed when the NASA determines to award the covered transaction, grant, or cooperative agreement