



Mathematics or Science Achievement Grant (MSAG) Program

Request for Proposals

SOLICITATION DATE
January 9, 2009

Letters Of Intent (LOI)

LOI SUBMISSION DEADLINE
January 30, 2009
5pm

Full Proposals by Invitation Only
Proposal deadline to be set when invitation is tendered

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Introduction

This solicitation focuses on Science Foundation Arizona's (SFAz) goal to support education that builds a highly skilled Arizona workforce as the foundation for the 21st century knowledge-based economy. This means more P-12 students graduating with the needed science, technology, engineering and mathematics ("STEM") skills and abilities, and an increase in the number of students that are prepared for and pursue postsecondary education and workforce training in STEM disciplines.

The Arizona STEM Education Center (STEMAz) at SFAz supports this goal and the vision for an Arizona that is competitive and inspired to succeed in a global marketplace by creating a world-class STEM education infrastructure to support Arizona's innovation economy.

With this vision in mind, and with funding from the Arizona State Board of Education (SBE), STEMAz intends to support investments in areas that bring to focus STEM education in Arizona in three strategic areas:

1. STEM teacher recruitment and retention, preparation and professional development that include appropriate 21st century skills training (problem solving, creative thinking, scientific reasoning, and technology skills).
2. Systemic policies and actions that bring to scale efforts enhancing the quality and availability of STEM learning opportunities for students. Such opportunities may be in the classroom, or through informal, out-of-school time learning activities, caring adult or mentor support, and /or youth engagement through hands-on, relevant, service-learning activities.
3. Articulation and coordination between entities, organizations, institutions, and/or schools focusing on these student- and teacher-centric STEM education efforts.

Objective

This is call for innovative Mathematics or Science Achievement Grant (MSAG) proposals that comprehensively address STEMAz's three strategic focus areas and that ultimately impact all students. Proposals should only be undertaken because an unusual opportunity will be realized, an extraordinary advantage will be gained, or a uniquely innovative change of major significance in one or more of these areas will occur that will be widely recognized by all STEM stakeholders. Proposals should bring about systemic change, reach beyond a single classroom, teacher or school, and offer a state-wide impact through multiple partners across the P-20 (early childhood through postsecondary) education continuum.

MSAG proposals should create better learning experiences in STEM for students and provide teachers and administrators with tools and training to enrich lessons and activities and build strong foundations in STEM by:

- Extending best teachers practices through peer leadership and quality teaching partnerships
- Integrating math and science across the curriculum
- Introducing science and math literacy through engineering skills and applications
- Integrating hands-on and service-learning experiences inside and/or outside the classroom with practicing scientists, engineers and other STEM professionals
- Integrating technology into teaching and learning, and as an assessment tool
- Involving parents and the community through outreach and/or direct participation

STEMAz especially encourages proposals that: 1) address the challenges and needs of under-represented Arizona populations in STEM education and workforce development; and 2) incorporate the historical contributions of under-represented populations to STEM fields, inventions and/or discoveries.

A **Letter of Intent (LOI)** must precede submission of any full proposal, which can only be submitted at the invitation of the STEMAz Program Officer. LOIs are due no later than 5pm on Friday, January 30, 2009.

Funding

Eligible applicants may request up to \$500,000 per year for up to three years.

Proposals that seek to support teachers working in STEMAz-funded programs that require summer stipends are expected to include payment at *market-level* monthly rates and cover the costs of insurance as needed.

STEMAz may support multi-year investments on evidence of good progress and continuing availability of resources. A multiple year investment strategy also permits development of rational performance metrics and a greater return on the investment.

In lieu of indirect costs (which are not allowed), a 10% institutional allowance may be added to better enable the recipient to support this work.

The Principal Investigator (PI) must clearly spell out the return on investment to the State. Each proposal must define metrics and specify resources within the proposal needed for measuring progress, including formative and summative evaluation and assessment strategies.

Eligibility

MASG grants will be awarded to organizations whose proposed efforts directly benefit youth in K-14 grade ranges, or to school districts and charter schools, and that demonstrate through specific performance measures and supporting data that the proposed programs provide new and innovative ways to increase pupils' mathematics or science (STEM) skills. School districts and charter schools may contract with a service provider (any non-profit organization or institution). Partnerships between K-12 school districts and higher education institutions or entities are strongly encouraged. Priority shall be given to proposals directed toward improving student mathematics and science achievement scores.

Proposal Review Process

The assessment and evaluation process includes the following:

- Quality of the proposal and potential return on investment (ROI);
- Track record of the Principal Investigator;
- Impact on targeted students; metrics must be clearly stated and explained;
- Value to Arizona STEM educational attainment and literacy; attainability of milestones;
- Alignment of the proposal with components of STEMAz's strategic focus areas and correlating aspects listed in the Objectives;
- Relative impact of competing proposals;
- Budget appropriateness and preparation.

Expert review panel members will be drawn from outside the State of Arizona; and where there is no conflict of interest, experts from other states who now reside in Arizona may be called upon.

Letter Of Intent (LOI) content requirements

The prospective PI should submit a letter of intent (LOI) of **no more than** three pages. The letter should provide an Introduction and Overview of what is being proposed and include: (1) a statement of need, (2) who will benefit and (3) in what measurable ways, (4) why this is important for Arizona, and (5) how the proposed effort will be sustained when/if funding is no longer available.

The LOI should be directed to the attention of the Program Officer for STEM Education at the Science Foundation Arizona, 400 E. Van Buren Street, Suite 200, Phoenix, AZ 85004. Deadline is 5pm, Friday, January 30, 2009.

Proposal Content Requirements and submission (by invitation only)

Eligible applicants submitting proposals must provide the following in the order indicated:

- a definitive title (15-word maximum) and brief abstract (100-word maximum);
- needs assessment and clear statement of objectives;
- statement of core activities and essential features;
- evaluation and assessment plan, including 5-month and 11-month milestones;
- budget/justification.

Proposal deadline to be set when invitation is tendered.

Proposals not in compliance with this Open Call RFP may be withdrawn without review. Use the following as a guide to writing the proposal:

Complete Proposal (maximum 10 pages, 12-point Arial, 1-in margins) including:

- Concise statement of what is intended, why it is important, how it will happen, who are the stake holders;
- Summary of what is being done to make K-12 excellence a priority at the PI institution;
- Evidence of PI accomplishments in the area of the proposal;
- Plans for measuring performance and success over time, including clear milestones.

Required information

- SFAz cover sheet;
- Title and abstract sheet;
- Complete proposal (max. 10 pages);
- Budget request (template attached) and 1-page justification per year of funding requested plus a cumulative budget for multiple year proposal requests;
- Letter(s) of commitment with respect to the partnership and matching funds (up to 3 pages);
- Evidence of 501(c)(3) or government status of applicant's institution.
- Curriculum Vitae (CVs) of no more than 2-pages for PI (and Co PI), and lead partner(s), making sure to include the following if applicable:
 - Professional preparation
 - Appointments/work history

- Relevant publications
- Other significant publications
- Notable Achievements
- Awards and Recognition

Submission Documents

The complete application will include:

- One (1) signed original (clearly mark “ORIGINAL”), not stapled, paper clip instead
 - Maximum 10 pages
 - 12-point Arial
 - Single-spaced
 - 1-in. margins all around
- Ten (10) paper copies, 9 stapled, 1 not stapled (paper clip instead)
- One (1) Electronic submission
- Bind the original document and the one unstapled paper copy with rubber band
- Use of divider pages, bound jackets, or covers may result in proposals returned without review
- Mail to: **Mathematics or Science Achievement Grant Program, STEMAz**
Science Foundation Arizona
400 E. Van Buren Street
Suite 200
Phoenix, AZ 85004
- Upload Application in PDF format to the SFaz FTP server at: <http://sfoaxserve.sfaz.org/>.
(to bypass certificate notification, press continue) username [k12dropbox](#); ignore
PASSWORD prompt.
 - Name the file according to PI's last name and name of institution (e.g. LAST
NAME_INSTITUTION)

Questions regarding Science Foundation Arizona Programs: info@sfaz.org/stemeducation

Leonard W. Fine, STEMAz Program Officer, SFaz
Phone: 602-682-2814