

NSF GRADUATE TEACHING FELLOWS IN K-12 EDUCATION

Program Solicitation

NSF 00-46

(Replaces NSF 99-75)

DIRECTORATE FOR EDUCATION AND HUMAN RESOURCES

DEADLINE: MAY 1, 2000



NATIONAL SCIENCE FOUNDATION



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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Name: NSF Graduate Teaching Fellows in K–12 Education (GK-12)

Short Description/Synopsis of Program:

This program supports fellowships and associated training that will enable graduate students and advanced undergraduates in the sciences, mathematics, engineering, and technology to serve in K–12 schools as resources knowledgeable about both the content and applications of science, mathematics, engineering, and technology. Academic institutions apply for awards to support fellowship activities. Institutions are responsible for: 1) selecting Fellows; 2) partnering with school districts for placement of Fellows in schools; and 3) providing appropriate training for Fellows. The Fellows will serve as resources for teachers in science and mathematics instruction. Expected outcomes include improved communication and teaching skills for the Fellows, enriched learning by K–12 students, professional development opportunities for K–12 teachers, and strengthened partnerships between institutions of higher education and local school districts.

Cognizant Program Officer: Dr. Sonia Ortega, Division of Graduate Education, Room 907, telephone (703) 306-1697, e-mail sortega@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Nos.: 47.041, 47.049, 47.050, 47.070, 47.074, 47.075, 47.076, and 47.078

ELIGIBILITY

- ◆ Limitation on the categories of organizations that are eligible to submit proposals:

Proposals may be submitted only by academic institutions that grant masters or doctoral degrees in the sciences, mathematics, engineering, or technology.

- ◆ PI eligibility limitations:

The PI must be a faculty member in the sciences, mathematics, engineering, or technology.

- ◆ Limitation on the number of proposals that may be submitted by an organization:

An institution may submit no more than two proposals in which it is the only participating institution in the prospective award, and no more than one proposal in which it is the lead institution in a multi-institution collaboration, per round of competition.

AWARD INFORMATION

- ◆ Type of award anticipated: **Continuing Grant**
- ◆ Number of awards anticipated in FY2000: **Approximately 30**
- ◆ Amount of funds available: **Approximately \$25 million for this competition and continuing awards pending availability of funds**
- ◆ Anticipated date of award: **September 2000**

Proposal Preparation & Submission Instructions

◆ Proposal Preparation Instructions

- Letter of intent requirements: **A letter of intent is required by April 3, 2000.**
- Preproposal requirements: **None**
- Proposal preparation instructions: **Standard NSF *Grant Proposal Guide* (GPG) instructions and supplemental instructions in this program solicitation**
- Supplemental proposal preparation instructions: **See the detailed instructions later in this program solicitation.**
- Deviations from standard (GPG) proposal preparation instructions: **See detailed instructions later in this program solicitation.**

◆ Budgetary Information

- Cost sharing/matching requirements: **None**
- Indirect cost (F&A) limitations: **8% of Total Direct Costs, excluding fellowship stipends, cost-of-education allowances, and equipment**
- Other budgetary limitations: **Awards are expected to be in the range of \$200,000 to \$500,000 per year for two to three years. The stipend for a graduate student will be \$18,000 for a 12-month tenure. Institutions will be allowed a cost of education allowance of \$10,500 per year per graduate student. The stipend for an undergraduate student will be \$5,000 per academic year. A total of \$10,000 may be requested for software and special-purpose material.**

◆ FastLane Requirements

- FastLane proposal preparation requirements: **Use of FastLane is required.**
- FastLane points of contact: **LaVerne Friels, e-mail: lfriels@nsf.gov, or Sheryl Balke, e-mail: sbalke@nsf.gov, Division of Graduate Education, Room 907, telephone (703) 306-1697**

◆ Deadline/Target Dates

- Letter of intent deadline (required): **April 3, 2000**
- Full proposal deadline: **5:00 PM submitter's local time, May 1, 2000**

PROPOSAL REVIEW INFORMATION

- ◆ Merit review criteria: **Standard National Science Board approved criteria, supplemented by program-specific criteria described in this program solicitation**

AWARD ADMINISTRATION INFORMATION

- ◆ Grant Award Conditions anticipated: **NSF GC-1 or FDP III**

- ◆ Special grant conditions anticipated: **None**
- ◆ Special reporting requirements anticipated: **None**

I. INTRODUCTION

The National Science Foundation (NSF) recognizes that graduates of higher education programs in science, mathematics, engineering, and technology (SMET) can contribute to the national effort to address the challenging issues in K-12 education across a broad spectrum of schools and educational levels. In particular, with appropriate training, SMET graduate students can serve K-12 teachers and schools as valuable resources for SMET content and applications. While the focus of this initiative is on graduate students serving as resources for K-12 education, benefits may accrue to involving undergraduate students. Consequently, advanced undergraduate SMET majors may be included as appropriate to further the goals of individual projects. NSF anticipates that, in the future, these Fellows will continue to contribute toward the improvement of the nation's educational enterprise. Education will benefit from the contributions of professionals who will have classroom experience and an understanding of topics in SMET education such as how scientific knowledge and the process of inquiry can be communicated to diverse novice learners in a variety of settings, how teaching and learning can be assessed, how new disciplinary knowledge can be incorporated in curriculum development, and how technology can be used to advance the teaching of SMET. The higher education community will benefit from the improved preparation of pre-college students in SMET.

To support these opportunities, the Foundation will offer the program **NSF Graduate Teaching Fellows in K-12 Education (GK-12)**. Approximately \$25 million is expected to be available to support approximately 30 awards for this competition and continuing grants. Awards are expected to be in the range of \$200,000 to \$500,000 per year for two to three years.

The GK-12 program is managed by the Directorate for Education and Human Resources (EHR) and supports the training of students in SMET disciplines covered by NSF's Directorates for Biological Sciences (BIO), Computer and Information Science and Engineering (CISE), Engineering (ENG), Geosciences (GEO), Mathematical and Physical Sciences (MPS), and Social, Behavioral, and Economic Sciences (SBE); and the Office of Polar Programs (OPP).

II. PROGRAM OBJECTIVES

The primary objective of the program is to provide fellowships to highly qualified graduate and advanced undergraduate students in science, mathematics, engineering and technology (SMET) disciplines to serve directly as SMET resources in the Nation's K-12 schools.

GK-12 Fellows, selected by awardee institutions, will work directly with teachers to, for example:

- demonstrate key concepts;
- connect elementary and secondary learning to the habits and skills required for future study in SMET disciplines;
- provide role models for future SMET professionals;
- enhance teachers' content knowledge and understanding of principles of science and mathematics; and
- assist in science and mathematics instruction.

Expected outcomes include (1) improved communication and teaching-related skills for Fellows, (2) enriched learning by K-12 students, (3) professional development opportunities for K-12 teachers, and (4) strengthened partnerships between higher education institutions and local school districts.

The K-12 school(s) must be involved in the development of the project plan. Although training activities on the campus of an institution of higher education may be part of the project plan, it is expected that the preponderance of participant activities with K-12 teachers and students will occur in K-12 schools. Principal Investigators (PIs) are encouraged to establish collaborative arrangements with other institutions (e.g., two- and four-year institutions, industry, non-profit organizations, and museums) to support their activities.

III. AWARD INFORMATION

The number and size of awards will vary depending upon the scope of projects and availability of funds; however, it is anticipated that approximately 30 institutional awards in the range of \$200,000 to \$500,000 per year for a period of two to three years will be made as a result of this competition.

IV. STIPENDS AND ALLOWANCES

The stipend for a graduate student will be \$18,000 for a 12-month tenure. In addition, the grantee institution will be allowed a cost-of-education allowance of \$10,500 per tenure year per graduate student in lieu of tuition and fees normally charged to students of similar academic standing, unless such charges are optional or refundable. The stipend for an undergraduate student will be \$5,000 per academic year and \$5,000 per summer. All Fellows will spend a minimum of ten hours per week providing direct assistance to K-12 teachers and five hours of preparation outside of the classroom.

V. ELIGIBILITY

A. Institutions¹

Academic institutions in the United States and its territories that grant masters or doctoral degrees in SMET disciplines are eligible to apply. An institution may submit up to two single-institution proposals, and as lead institution, one multi-institution proposal, per round of competition. When multiple institutions are involved, a single institution must accept overall management responsibility. Collaborating institutions may include two- and four-year colleges or non-academic institutions, industry, non-profit organizations, museums, etc. NSF does not anticipate making more than one GK-12 award to a single institution as a result of any single competition. Projects involving any of the SMET fields normally supported by NSF are eligible. Projects may draw participants from two or more departments within one institution or from more than one institution.

B. Principal Investigator

The PI must be a faculty member in a SMET discipline and should serve as the director of the GK-12 project.

C. Fellows

GK-12 Fellows will be selected by awardee institutions, but must be:

- citizens, nationals², or permanent residents of the United States at the time of application; and
- graduate students enrolled in SMET programs or advanced undergraduate SMET majors who have demonstrated a strong proficiency in mathematics and science.

¹ An institution is defined as a separate legal and fiscal entity, whether at the central or system level, or branch campus level, which can receive awards and which is separately and consistently identified at that level for federal research and development reporting purposes through a Federal Entity Number. NSF institution codes ARE NOT entity numbers.

² The term “national of the United States” designates a citizen of the United States or a native resident of a US possession such as American Samoa. Foreign students who hold student visas are not eligible to apply.

VI. PROPOSAL PREPARATION & SUBMISSION INSTRUCTIONS

A. Letter of Intent

A letter of intent is required before submitting a full proposal and is intended to enhance the efficiency of the review process. The letter of intent is not a preliminary proposal. It is a brief statement that must address the following: 1) essential features of the project design; 2) principal investigator and list of faculty participants including their disciplines and institutional affiliation; 3) K-12 school district participants and their affiliation; and 4) disciplines to be covered by K-12 teachers and GK-12 Fellows. Letters of intent must be sent by electronic mail to gk-12@nsf.gov by April 3, 2000. A letter of intent is required for all potential applicants including those who were declined in FY 1999 and are interested in re-applying to the program.

B. Proposal Due Dates

Proposals MUST be submitted electronically by 5:00 PM local time, May 1, 2000. Copies of the signed proposal cover sheet must be submitted in accordance with the instruction identified below. The PI is responsible for the completeness and accuracy of the proposal as submitted. Unless requested by the NSF, additional information may not be sent following proposal submission.

C. Proposal Format

Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *Grant Proposal Guide* (GPG), NSF 00-2. The complete text of the GPG (including electronic forms) is available electronically on the NSF Web site <http://www.nsf.gov/pubs/2000/nsf002/start.htm>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722, or by e-mail from pubs@nsf.gov.

D. FastLane Requirements

GK-12 proposals must be submitted electronically using the NSF FastLane system available through the World Wide Web at <https://www.fastlane.nsf.gov/>. In order to use NSF FastLane to prepare and submit a proposal, the following are required:

Browser (must support multiple buttons and file upload)

- Netscape 3.01 or greater
- Microsoft Internet Explorer 4.01 or greater

PDF Reader (needed to view/print forms)

- Adobe Reader 4.0 or greater

PDF Generator (needed to create project description)

- Adobe Acrobat 3.01 or greater
- Aladdin Ghostscript 5.10 or greater

To access the FastLane "Proposal Preparation" application, an institution must be registered. A list of registered institutions and the FastLane registration form are located on the FastLane Web page. The Sponsored Research Office (SRO) or equivalent must provide a FastLane Personal Identification Number (PIN) to each Principal Investigator (PI) to gain access to the FastLane "Proposal Preparation" application. PIs who have not submitted a proposal to NSF in the past must contact their SRO to be added to the NSF PI database. This should be done as soon as the decision to prepare a proposal is made.

Submission of Signed Cover Sheets: The signed copy of the proposal Cover Sheet (NSF Form 1207) must be postmarked (or contain a legible proof of mailing date assigned by the carrier) by May 8, 2000 and be forwarded to the following address:

National Science Foundation
DIS - FastLane Cover Sheet
4201 Wilson Blvd.
Arlington, VA 22230

A proposal may not be processed until the complete proposal (including the signed Cover Sheet), has been submitted to NSF.

E. Proposal Content

Proposals must contain the following elements in the order indicated. Proposals that do not strictly adhere to the specified page limitations (given below) will be ineligible for consideration and will be returned without review.

1. **Cover Sheet for Proposals (NSF Form 1207):** In the “For consideration by the following NSF Organizational Unit” field, click on the “Add Org. Unit” button and then select “GRAD TEACHING FELLOWS IN K-12.” In the “Program Announcement/Solicitation No.” field, enter the program solicitation number NSF 00-46. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing. A short, informative title should be provided in the appropriate field; enter “GK-12” at the beginning of this proposal title. Mail the signed cover sheet to NSF in accordance with the instructions given below in “Proposal Due Dates.”
2. **Project Summary:** Provide a brief description (*200 words or less*) of the training program, including the activity theme, educational features, and objectives. This section is expected to indicate benefits to be achieved by both the K-12 and higher education partners.
3. **Project Description:** *This section is limited to 15 pages, including any visual materials (figures, charts, graphs, maps, photographs, etc.).* The Project Description should include the following subsections:
 - a. **Goals and Objectives:** Provide the conceptual focus, goals, and objectives of the project. Describe the activities that will form the foundation for the project.
 - b. **Project Plan:** It is important to indicate in this section not only what activities will be conducted but also how they will be implemented. The project plan is expected to:
 - demonstrate a clear partnership and active participation by the institution(s) of higher education, GK-12 Fellows, local K-12 school district(s), and any participating community resources;
 - incorporate training activities for Fellows based on a disciplinary or multidisciplinary theme, integrating instructional strategies that are consistent with mathematics and science standards established by national organizations, states, and school districts;
 - address plans to prepare Fellows to serve as content resources to instructors of novice learners;
 - clarify in sufficient detail the benefit to GK-12 Fellows and to K-12 education in supporting this type of project;
 - indicate any relevant history by the higher education institution(s) in service learning activities;
 - indicate alignment with teacher preparation and/or enhancement activities by the participating institution(s) of higher education and the local K-12 school district(s); and
 - incorporate a detailed plan indicating how the GK-12 Fellows will enhance K-12 SMET instruction in the specific school districts.

- c. **Recruitment and Selection:** Describe plans and procedures for the recruitment and selection of GK-12 Fellows, including specific provisions for success with women, underrepresented minorities³ and persons with disabilities. Also provide reasonable estimates of the number of students eligible and likely to be interested in participating, and explain the basis for these estimates.
- d. **Organization and Management:** The Principal Investigator (PI) will have overall responsibility for the administration of the award, the management of the project, and interactions with the NSF. The PI and the home institution are expected to develop an administrative structure that enables faculty, K-12 teachers, school administrators, Fellows, and others involved in the group effort to interact productively during the award period. The PI is expected to be an integral participant in the education and training activities of the GK-12 project.

This section is expected to:

- describe plans and procedures for the development of a management team for the proposed activity indicating how the responsibilities between team members will be allocated;
 - provide plans to achieve maximum leverage at the K-12 school level from the limited number of GK-12 Fellows expected to be available to any given K-12 school district;
 - specify a school-level implementation plan to optimize use of GK-12 Fellows as resources in support of K-12 teachers;
 - include assurances from the institution of higher education and the school district that the NSF funds will not supplant extant financial resources assigned to science and mathematics education; and
 - describe how the activities will be sustained after the period of NSF funding.
- e. **School District Participation:** Clearly indicate the specific schools where the GK-12 Fellows are expected to conduct their activities. A statement from the superintendent(s) of the local K-12 school district(s) should be included with the application. This statement should include some background about participating schools, demographics of student population, specific SMET needs, coordinated plans of the district to receive Fellows into its schools, plans for coordination with standards-based instruction, and any financial commitments or other support to be provided to the Fellows and/or cooperating teachers. The local superintendent(s) or chief school officer(s) who can represent the school district and honor its financial commitments must sign this statement. (The statement with the original signature may be electronically scanned and incorporated into the Project Description PDF file.)
 - f. **Evaluation:** Describe an evaluation plan, including the performance indicators and other specific measures that will be used to assess the project’s success in meeting its goals and objectives. Although each project should propose its own measures, some later standardization is anticipated so that NSF can meet the requirements of the Government Performance and Results Act of 1993.

This section is expected to:

- provide the basic data related to the operation of the proposed plan including number of students participating, percentage of members of underrepresented groups, and teachers involved;
- indicate how the effectiveness of the training of students will be measured and how the impact of the program on the school districts and on the institutions will be evaluated;
- indicate plans for evaluation of the efficacy of project activities, including the development of a process for collecting and interpreting evaluative data and attributing impacts; and
- include timetables and metrics for accomplishments, as well as indicate who will be responsible for monitoring and evaluating the progress of this effort.

³ The term “underrepresented minorities” includes only the groups whose representation in SMET is less than their representation in the population: Blacks, Hispanics and American Indians (from NSF: Women, Minorities and Persons with Disabilities in Science and Engineering: 1998). This category also includes Native Hawaiians and other Native Pacific Islanders.

Project participants should be prepared to cooperate in an overall program evaluation to be conducted by the NSF.

- g. Results from Prior Support: Provide information about relevant funding that the PI or co-PI(s) has received during the past five years **related to GK-12 activities**.
 - h. List of Faculty Participants: Include departmental and, if appropriate, institutional affiliation of all faculty participants expected to mentor students or to otherwise play an important role in the project.
4. **Curriculum Vitae:** *This section must not exceed 2 pages per individual.* For each of the personnel included on the list of faculty participants (Item 3h), provide:
- Curriculum vita highlighting information that will help in understanding the qualifications that this individual will bring to the GK-12 project.
 - Information about recent training activities. This should include the number and names of undergraduates and graduate students who carried out research under the faculty member's direction in each of the last three years. Also list the titles of courses taught by the faculty member during the past three years. Other relevant activities, such as organization of workshops or special courses, may be included.
 - Information related to activities conducted in collaboration with K-12 schools or other educational organizations.
 - A list of current and past collaborators including those with whom the faculty member has co-authored papers within the past four years.
5. **Budget:** Provide a Summary Proposal Budget (NSF Form 1030) for each year of support requested. FastLane will create the cumulative budget automatically.

Recognizing the importance of infrastructure support and the significant involvement of faculty and K-12 teachers, up to 30% of the budget may be designated for direct costs other than student stipends and cost-of-education allowances. These funds are intended to supplement institutional and school district resources in support of GK-12 activities.

Funds may be requested for personnel to develop and construct special instruments, for the purchase of computer software, or for other special-purpose materials related to the project. The total requested for software and special-purpose materials may not exceed \$10,000.

Funds should be included for the PI and up to three participants to attend a meeting convened by NSF in Washington, D.C. The participants should include at least one school district representative and one GK-12 fellow.

Indirect costs are limited to 8% of total direct costs, excluding stipends, cost-of-education allowances, and equipment.

Budget Justification: This section must not exceed 3 pages. A brief justification for funds in each budget category should be provided. This section should also include details of institutional cost sharing, if any, and of other sources of support for the GK-12 project, such as government, industry, or private foundations. (Although cost sharing is not required, any such commitment specified in the proposal will be referenced and included as a condition of an award resulting from this solicitation.) As part of this section, provide a list of all relevant documentation, including funding commitments by each institution and organization involved in the project as well as any other sources of funding. Letters or other documentation on the list of commitments should be included in the Supplementary Docs. Section. While there is no limit on the number of letters that may be *listed*, no more than six letters of commitment may be included as part of the proposal itself. Do not include additional letters of commitment, and do not list or include letters whose sole purpose is to endorse the project.

VII. PROPOSAL REVIEW INFORMATION

A. Merit Review Criteria

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by program officers charged with the oversight of the review process. NSF invites the proposer to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, and adjacent disciplines to that principally addressed in the proposal, etc.

General Review Criteria

Proposals will be reviewed against the following general merit review criteria, established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those relevant to the proposal and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

In light of the GK-12 program's objectives, reviewers will be asked to consider the above two merit review criteria with emphasis placed on:

- Team composition and extensive collaboration between the proposing institution of higher education and the participating K-12 school district(s).
- Consistency of project designs with mathematics and science standards established by national organizations, states, and school districts.
- Expected benefits to Fellows, their institutions of higher education, K-12 schools, and K-12 teachers.
- Importance and coherence of the comprehensive multidisciplinary activity theme, including its effectiveness as an intellectual focus for the project.
- Excellence of the proposed outreach activity as reflected in the major outreach efforts.
- Quality of the planned education and training activities for Fellows.
- Appropriateness of the formal administrative plan and organization structure in assuring fair and effective allocation of group resources.
- Effectiveness of the strategy for preparing a diverse science and engineering workforce, including operational plans for student recruitment and selection.
- Appropriateness of the plans for evaluation of project performance, including longitudinal and process data.
- Appropriateness of the budget.
- Sustainability of the project activities beyond the period of NSF funding.

A summary rating and accompanying narrative will be completed and signed by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are mailed to the PI/PD by the Program Director. In addition, the

proposer will receive an explanation of the decision to award or decline funding.

Additional Factors

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learner perspectives. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

Integrating Diversity into NSF Program, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens—women and men, underrepresented minorities, and persons with disabilities—are essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

B. Merit Review Process

Most of the proposals submitted to NSF are reviewed by mail review, panel review, or some combination of mail and panel review. Proposals submitted in response to this solicitation will be reviewed by panel review; the panel reviews may be supplemented by ad hoc reviews and site visits as appropriate.

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Reviewers will be asked to formulate a recommendation to either support or decline each proposal. A program officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation. In most cases, PI(s) will be contacted by the program officer after his or her recommendation to award or decline funding has been approved by his or her supervisor, the division director. This informal notification is not a guarantee of an eventual award. NSF will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals in this category. In those cases where a proposal is being considered for joint funding by separate divisions, directorates, or agencies, NSF will be able to inform applicants within nine months in 95 percent of proposals. The time interval begins on the proposal deadline or target date or from the date of receipt if deadlines or target dates are not used by the program. The interval ends when the division director accepts the program officer's recommendation.

In all cases, after final programmatic approval has been obtained, award recommendations are then forwarded to the Division of Grants and Agreements (DGA) for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. PIs are cautioned that only a grants officer may make commitments, obligations, or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with an NSF program officer. A PI or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF grants officer does so at its own risk.

VIII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to the submitting organization by a grants officer in the Division of Grants and Agreements (DGA). Organizations whose proposals are declined will be advised as promptly as possible by the NSF

office or division administering the program. Verbatim copies of reviews, not including the identity of the reviewers, will be provided automatically to the PI.

B. Grant Award Conditions

An NSF grant consists of (1) the award letter, which includes any special provisions applicable to the grant and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable grant conditions, such as Grant General Conditions (NSF GC-1) or Federal Demonstration Partnership Phase III (FDP) Terms and Conditions,⁴ and (5) any NSF brochure, program guide, solicitation or other NSF issuance that may be incorporated by reference in the award letter. Electronic mail notification is the preferred way to transmit NSF grants to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant program officer at least 90 days before the end of the current budget period.

Within 90 days after expiration of a grant, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented a new electronic project reporting system, available through FastLane, which permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. Reports will continue to be required annually and after the expiration of the grant, but PIs will not need to re-enter information previously provided, either with the proposal or in earlier updates using the electronic system.

Effective October 1, 1999, PIs are required to use the new reporting format for annual and final project reports.

D. New Awardee Information

If the submitting organization has never received an NSF award, it is recommended that the organization's appropriate administrative officials become familiar with the policies and procedures in the NSF *Grant Policy Manual* which are applicable to most NSF awards. The *Prospective New Awardee Guide* (NSF 99-78) includes Administration and Management Information; Accounting System Requirements and Auditing Information; and information on Payments to Organizations with Awards. This information will assist an organization in preparing documents that NSF requires to conduct administrative and financial reviews of an organization. The guide also serves as a means of highlighting the accountability requirements associated with Federal awards. This document is available electronically on NSF's Web site <http://www.nsf.gov/>.

IX. PROGRAM EFFECTIVENESS INDICATORS

PIs, school district representatives and GK-12 Fellow representatives are expected to attend a meeting in Washington, D.C. convened by NSF to exchange ideas, to establish and strengthen communication networks, to learn about the activities of GK-12 Fellows, and to discuss ways of measuring progress. This group will also discuss the effectiveness of GK-12 activities in preparing the Fellows for careers in SMET fields and enhancing K-12 instruction.

⁴ These documents may be accessed electronically on NSF's Web site <http://www.nsf.gov/>. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722, or by e-mail from pubs@nsf.gov.

X. ADDITIONAL INFORMATION

If warranted, NSF may assemble a list of Frequently Asked Questions (FAQ) relating to this solicitation. Any FAQ prepared will be accessible through the GK-12 program's home [page http://www.nsf.gov/home/crssprgm/gk12/](http://www.nsf.gov/home/crssprgm/gk12/).

XI. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding the GK-12 program may be addressed to GK-12 Program, Division of Graduate Education, suite 907N, 4201 Wilson Blvd., Arlington, VA 22230. The telephone number is (703) 306-1697, fax number (703) 306-0468. Requests for information via the INTERNET may be addressed to gk-12@nsf.gov.

XII. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding opportunities for research and education in science, mathematics, and engineering. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter. Beginning in fiscal year 1999, the *Guide* will only be available electronically. It is accessible at the NSF Web site [HTTP://WWW.NSF.GOV](http://www.nsf.gov). The direct URL for the *Guide* is [HTTP://WWW.NSF.GOV/CGI-BIN/GETPUB?GP](http://www.nsf.gov/cgi-bin/getpub?gp). Many NSF programs offer solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices listed in Appendix A of the GPG.

Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF *E-Bulletin*, which is also available electronically at the NSF Web site. The direct URL for the most recent issue of the *E-Bulletin* is <http://www.nsf.gov/home/ebulletin/>. Subscribers can also sign up for NSF's Custom News Service to find out what funding opportunities are available.

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Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the program solicitation or contact the program coordinator at (703) 306-1636.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation regarding NSF programs, employment, or general information. TDD may be accessed at (703) 306-0090 or through FIRS on 1 (800) 877-8339.

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Reports Clearance Officer; Information Dissemination Branch, DAS; National Science Foundation; Arlington, VA 22230.

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