

107TH CONGRESS  
1ST SESSION

# H. R. 1858

To make improvements in mathematics and science education, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 16, 2001

Mr. BOEHLERT introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Education and the Workforce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To make improvements in mathematics and science education, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “National Mathematics  
5       and Science Partnerships Act”.

6       **SEC. 2. FINDINGS.**

7       The Congress finds the following:

8               (1) 12 years ago the President of the United  
9       States convened the Nation’s Governors to establish

1 common goals for the improvement of elementary  
2 and secondary education.

3 (2) Among the National Education Goals estab-  
4 lished was the goal that by the year 2000 United  
5 States students would be first in the world in mathe-  
6 matics and science achievement.

7 (3) Despite these goals, 8th graders in the  
8 United States showed just average performance in  
9 mathematics and science in the Third International  
10 Mathematics and Science Study-Repeat and dem-  
11 onstrated lower relative performance than the cohort  
12 of 4th graders 4 years earlier.

13 (4) The United States must redouble its efforts  
14 to provide all of its students with a world-class edu-  
15 cation in mathematics, science, engineering, and  
16 technology.

17 **SEC. 3. DEFINITIONS.**

18 In this Act—

19 (1) the term “Director” means the Director of  
20 the National Science Foundation;

21 (2) the term “institution of higher education”  
22 has the meaning given such term in section 101 of  
23 the Higher Education Act of 1965 (20 U.S.C.  
24 1001);

1           (3) the term “eligible nonprofit organization”  
2       means a nonprofit research institute or a nonprofit  
3       professional association with demonstrated experi-  
4       ence delivering mathematics or science education as  
5       determined by the Director;

6           (4) the term “local educational agency” has the  
7       meaning given such term in section 1401 of the Ele-  
8       mentary and Secondary Education Act of 1965 (20  
9       U.S.C. 8801); and

10          (5) the term “State educational agency” has  
11       the meaning given such term in section 1401 of the  
12       Elementary and Secondary Education Act of 1965  
13       (20 U.S.C. 8801).

14   **SEC. 4. AUTHORIZATIONS OF APPROPRIATIONS.**

15       Any authorization of appropriations in this Act shall  
16       be considered to be in addition to amounts otherwise au-  
17       thorized or appropriated for the National Science Founda-  
18       tion.

1 **TITLE I—MATHEMATICS AND**  
2 **SCIENCE EDUCATION PART-**  
3 **NERSHIPS**

4 **Subtitle A—Mathematics and**  
5 **Science Education Partnerships**

6 **SEC. 101. PROGRAM AUTHORIZED.**

7 (a) IN GENERAL.—(1) The Director shall establish  
8 a program to award grants to institutions of higher edu-  
9 cation or eligible nonprofit organizations (or consortia  
10 thereof) to establish mathematics and science education  
11 partnership programs to improve the instruction of ele-  
12 mentary and secondary science education.

13 (2) Grants shall be awarded under this section on a  
14 merit-reviewed competitive basis.

15 (b) PARTNERSHIPS.—(1) In order to be eligible to re-  
16 ceive a grant under this section, an institution of higher  
17 education or eligible nonprofit organization (or consortium  
18 thereof) shall enter into a partnership with a local edu-  
19 cational agency that may also include a State educational  
20 agency or one or more businesses, or both.

21 (2) A participating institution of higher education  
22 shall include mathematics, science, or engineering depart-  
23 ments in the programs carried out through a partnership  
24 under this subsection.

1       (c) USES OF FUNDS.—Grants awarded under this  
2 section shall be used for activities that draw upon the ex-  
3 pertise of the partners to improve elementary or secondary  
4 education, or both, in mathematics or science, or both.  
5 Such activities may include—

6           (1) recruiting and preparing students for ca-  
7 reers in elementary or secondary mathematics or  
8 science education;

9           (2) offering professional development programs,  
10 including summer or academic year institutes or  
11 workshops, designed to strengthen the capabilities of  
12 existing mathematics and science teachers;

13          (3) offering innovative programs that instruct  
14 teachers on using technology more effectively in  
15 teaching mathematics and science;

16          (4) developing distance learning programs for  
17 teachers or students;

18          (5) offering teacher preparation and certifi-  
19 cation programs for professional mathematicians,  
20 scientists, and engineers who wish to begin a career  
21 in teaching;

22          (6) developing assessment tools to measure stu-  
23 dent mastery of content and cognitive skills;

24          (7) developing or adapting elementary and sec-  
25 ondary school curricular materials, aligned to State

1 standards, that incorporate contemporary research  
2 on the science of learning;

3 (8) developing undergraduate mathematics and  
4 science courses for education majors;

5 (9) using mathematicians, scientists, and engi-  
6 neers employed by private businesses to help recruit  
7 and train mathematics and science teachers;

8 (10) developing a cadre of master teachers who  
9 will promote reform and improvement in schools;

10 (11) developing and offering mathematics or  
11 science enrichment programs for students;

12 (12) providing research opportunities in busi-  
13 ness or academia for students and teachers;

14 (13) bringing mathematicians, scientists and  
15 engineers from business and academia into elemen-  
16 tary and secondary school classrooms; and

17 (14) any other activities the Director deter-  
18 mines will accomplish the goals of this section.

19 (d) MATCHING FUNDS REQUIRED.—The Director  
20 shall establish a minimum level of matching funds that  
21 partnerships must provide to receive grants under this sec-  
22 tion. The requirement shall specify the extent to which any  
23 match may be provided in kind.

1 **SEC. 102. SELECTION PROCESS.**

2 (a) APPLICATION.—An institution of higher edu-  
3 cation or an eligible nonprofit organization (or a consor-  
4 tium thereof) seeking funding under section 101 shall sub-  
5 mit an application to the Director at such time, in such  
6 manner, and containing such information as the Director  
7 may require. The application shall include, at a  
8 minimum—

9 (1) a description of the partnership and the role  
10 that each member will play in implementing the pro-  
11 posal;

12 (2) a description of each of the activities to be  
13 carried out, including—

14 (A) how such activities will be aligned with  
15 State and local standards and with other activi-  
16 ties that promote student achievement in math-  
17 ematics and science; and

18 (B) how such activities will be based on a  
19 review of relevant research, and why such ac-  
20 tivities are expected to improve student per-  
21 formance and strengthen the quality of mathe-  
22 matics and science instruction;

23 (3) how the partnership will serve as a catalyst  
24 for reform of mathematics and science education  
25 programs;

26 (4) how the partnership will assess its success;

1           (5) how the partnership will provide non-Fed-  
2       eral matching funds; and

3           (6) policies and procedures to ensure that Fed-  
4       eral funds will be used to supplement and not sup-  
5       plant funds being spent on improving science and  
6       mathematics education.

7       (b) REVIEW OF APPLICATIONS.—In evaluating the  
8       applications submitted under subsection (a), the Director  
9       shall consider—

10           (1) the ability of the partnership to effectively  
11       carry out the proposed programs;

12           (2) the extent to which the members of the  
13       partnership are committed to making the partner-  
14       ship a central organizational focus;

15           (3) the degree to which activities carried out by  
16       the partnership are based on relevant research and  
17       likely to result in increased student achievement;

18           (4) the degree to which such activities are  
19       aligned with State or local standards;

20           (5) the likelihood that the partnership will dem-  
21       onstrate activities that can be widely implemented as  
22       part of larger scale reform efforts; and

23           (6) the amount of non-Federal matching funds.

24       (c) AWARDS.—(1) The Director shall ensure, to the  
25       extent practicable, that partnership grants be awarded



1 under section 101 in a wide range of geographic areas and  
2 that the partnership program include rural, suburban, and  
3 urban local educational agencies.

4 (2) Not less than 50 percent of the partnerships  
5 funded under section 101 shall include businesses.

6 (3) The Director shall award grants under this sub-  
7 title for a period not to exceed 5 years.

8 **SEC. 103. ACCOUNTABILITY AND DISSEMINATION.**

9 (a) ASSESSMENT REQUIRED.—The Director shall  
10 evaluate the partnerships program established under sec-  
11 tion 101. At a minimum, such evaluations shall—

12 (1) use a common set of benchmarks and as-  
13 sessment tools to identify best practices and mate-  
14 rials developed and demonstrated by the partner-  
15 ships; and

16 (2) to the extent practicable, compare the effec-  
17 tiveness of practices and materials developed and  
18 demonstrated by the partnerships authorized under  
19 this subtitle with those of partnerships funded by  
20 other State or Federal agencies.

21 (b) DISSEMINATION OF RESULTS.—(1) The results  
22 of the evaluations required under subsection (a) shall be  
23 made available to the public, including through the Na-  
24 tional Science, Mathematics, Engineering, and Technology  
25 Education Digital Library, and shall be provided to the

1 Committee on Science of the House of Representatives  
 2 and the Committee on Health, Education, Labor, and  
 3 Pensions and the Committee on Commerce, Science, and  
 4 Transportation of the Senate.

5 (2) Materials developed under the program estab-  
 6 lished under section 101 that are demonstrated to be ef-  
 7 fective shall be made available through the National  
 8 Science, Mathematics, Engineering, and Technology Edu-  
 9 cation Digital Library.

10 (c) ANNUAL MEETING.—The Director shall convene  
 11 an annual meeting of the partnerships participating under  
 12 this subtitle to foster greater national collaboration.

13 **SEC. 104. AUTHORIZATION OF APPROPRIATIONS.**

14 There are authorized to be appropriated to the Na-  
 15 tional Science Foundation to carry out this subtitle  
 16 \$200,000,000 for each of fiscal years 2002 through 2006.

17 **Subtitle B—Teacher Research**  
 18 **Scholarship Program**

19 **SEC. 111. PROGRAM AUTHORIZED.**

20 (a) IN GENERAL.—(1) The Director shall establish  
 21 a program to award grants to institutions of higher edu-  
 22 cation or eligible nonprofit organizations (or consortia  
 23 thereof) to provide research opportunities in mathematics,  
 24 science, and engineering for elementary or secondary  
 25 school teachers of mathematics or science. Such institu-

1 tions of higher education or eligible nonprofit organiza-  
2 tions may include one or more businesses or Federal or  
3 State laboratories as partners under the program.

4 (2) Grants shall be awarded under this section on a  
5 merit-reviewed competitive basis.

6 (b) PROGRAM COMPONENTS.—Grant recipients  
7 under this section—

8 (1) shall recruit and select teachers and provide  
9 such teachers with opportunities to conduct research  
10 in academic, business, or government laboratories;

11 (2) shall ensure that the teachers have mentors  
12 and other programming support to ensure that their  
13 research experience will contribute to their under-  
14 standing of mathematics, science, and engineering  
15 and improve their performance in the classroom;

16 (3) shall provide teachers with a scholarship sti-  
17 pend; and

18 (4) may provide room and board for residential  
19 programs.

20 (c) USE OF FUNDS.—(1) Not more than 25 percent  
21 of the funds provided under a grant under this section  
22 may be used for programming support for teachers.

23 (2) The Director shall issue guidelines specifying the  
24 minimum or maximum amounts of stipends recipients may  
25 provide to teachers under this section.

1 (d) DURATION.—A teacher may participate in re-  
 2 search under the program under this section for up to 1  
 3 calendar year or 2 sequential summers.

4 (e) MATCHING FUNDS REQUIRED.—The Director  
 5 shall establish a minimum level of matching funds that  
 6 grantees must provide to receive grants under this section.  
 7 The requirement shall specify the extent to which any  
 8 match may be provided in kind.

9 **SEC. 112. SELECTION PROCESS.**

10 (a) APPLICATION.—An institution of higher edu-  
 11 cation or an eligible nonprofit organization (or a consor-  
 12 tium thereof) seeking funding under section 111 shall sub-  
 13 mit an application to the Director at such time, in such  
 14 manner, and containing such information as the Director  
 15 may require. The application shall include, at a  
 16 minimum—

17 (1) a description of the research opportunities  
 18 that will be made available to elementary or sec-  
 19 ondary school teachers, or both, by the applicant;

20 (2) a description of how the applicant will re-  
 21 cruit teachers to participate in the program and the  
 22 criteria that will be used to select the participants;

23 (3) a description of the number, types, and  
 24 amounts of the scholarships that the applicant in-  
 25 tends to offer to participating teachers;

1           (4) a description of the programming support  
2           that will be provided to participating teachers;

3           (5) a description of how the applicant will pro-  
4           vide non-Federal matching funds; and

5           (6) policies and procedures to ensure that Fed-  
6           eral funds will be used to supplement and not sup-  
7           plant funds for improving science and mathematics  
8           education.

9           (b) REVIEW OF APPLICATIONS.—In evaluating the  
10          applications submitted under subsection (a), the Director  
11          shall consider—

12           (1) the ability of the applicant to effectively  
13           carry out the proposed program;

14           (2) the extent to which the applicant is com-  
15           mitted to making the program a central organiza-  
16           tional focus;

17           (3) the likelihood that the research experiences  
18           and programming to be offered by the applicant will  
19           improve elementary and secondary education; and

20           (4) the amount of non-Federal matching funds.

21          (c) AWARDS.—(1) The Director shall ensure, to the  
22          extent practicable, that grants be awarded under this sub-  
23          title in a wide range of geographic areas and to assist  
24          teachers from rural, suburban, and urban local edu-  
25          cational agencies.

1       (2) The Director shall award grants under this sub-  
2 title for a period not to exceed 5 years.

3 **SEC. 113. AUTHORIZATION OF APPROPRIATIONS.**

4       There are authorized to be appropriated for the Na-  
5 tional Science Foundation to carry out this subtitle  
6 \$15,000,000 for each of fiscal years 2002 through 2006.

7 **TITLE II—NATIONAL SCIENCE,**  
8 **MATHEMATICS, ENGINEER-**  
9 **ING, AND TECHNOLOGY EDU-**  
10 **CATION DIGITAL LIBRARY**

11 **SEC. 201. IN GENERAL.**

12       The Director shall establish a program to expand the  
13 National Science, Mathematics, Engineering, and Tech-  
14 nology Education Digital Library (hereinafter in this Act  
15 referred to as the “Digital Library”) program to enable  
16 timely and continuous dissemination of elementary and  
17 secondary science, math, engineering, and technology edu-  
18 cational resources, materials, practices, and policies  
19 through the Internet and other digital technologies. The  
20 expanded Digital Library shall—

- 21           (1) contain an Internet-based repository of cur-  
22 ricular materials, practices, and teaching modules;  
23           (2) provide users of the Digital Library with ac-  
24 cess to all materials in the Digital Library through  
25 a single entry point;

1           (3) contain only materials that have been peer-  
2       reviewed and tested to ensure factual accuracy and  
3       effectiveness and that are aligned with recognized  
4       State and national mathematics and science stand-  
5       ards;

6           (4) present materials in a format that is con-  
7       sistent, facilitates ease of comparison and use by  
8       classroom teachers, and contains appropriate links  
9       to other Federal educational clearinghouses; and

10          (5) provide materials related to mathematics  
11       and science partnership programs, including—

12                (A) links to all of the programs developed  
13       through the mathematics and science partner-  
14       ships established under subtitle A of title I;

15                (B) data related to assessment and evalua-  
16       tion and final program reports developed under  
17       subtitle A of title I, including both positive and  
18       negative outcomes of the program;

19                (C) materials developed by the partner-  
20       ships under subtitle A of title I that have been  
21       demonstrated to be effective; and

22                (D) a mechanism for users to make com-  
23       ments or suggestions regarding the use and ef-  
24       fectiveness of posted materials.

1 **SEC. 202. GRANTS AND CONTRACT.**

2 (a) DESIGN OF LIBRARY.—(1) The Director may  
3 award grants to institutions of higher education or other  
4 qualified entities to design all or parts of the Digital Li-  
5 brary. The grants may cover the costs of acquiring and  
6 reviewing educational materials for dissemination through  
7 the Digital Library.

8 (2) Grants shall be awarded under this subsection on  
9 a merit-reviewed competitive basis.

10 (b) OPERATION.—The Director may contract out the  
11 operation and management of the Digital Library.

12 **SEC. 203. AUTHORIZATION OF APPROPRIATIONS.**

13 There are authorized to be appropriated for the Na-  
14 tional Science Foundation to carry out this title  
15 \$20,000,000 for each of fiscal years 2002 through 2006.

16 **TITLE III—STRATEGIC EDU-**  
17 **CATION RESEARCH PROGRAM**

18 **SEC. 301. ESTABLISHMENT OF CENTERS FOR RESEARCH**  
19 **ON LEARNING AND EDUCATION IMPROVE-**  
20 **MENT.**

21 (a) IN GENERAL.—(1) The Director shall award  
22 grants to institutions of higher education (or consortia  
23 thereof) to establish 4 multidisciplinary Centers for Re-  
24 search on Learning and Education Improvement.

25 (2) Grants shall be awarded under this subsection on  
26 a merit-reviewed competitive basis.



1 (b) PURPOSE.—The purpose of the Centers shall be  
2 to conduct and evaluate research in cognitive science, edu-  
3 cation and related fields and to develop ways in which the  
4 results of such research can be applied in elementary and  
5 secondary classrooms to improve the teaching of mathe-  
6 matics and science.

7 (c) FOCUS.—(1) Each Center shall be focused on a  
8 different challenge faced by elementary or secondary  
9 school teachers of mathematics and science. In deter-  
10 mining the research focus of the Centers, the Director  
11 shall consult with the National Academy of Sciences and  
12 take into account the extent to which other Federal pro-  
13 grams support research on similar questions.

14 (2) The proposal solicitation issued by the Director  
15 shall state the focus of each Center and applicants shall  
16 apply for designation as a specific Center.

17 (d) MATCHING FUNDS REQUIRED.—The Director  
18 shall establish a minimum level of matching funds that  
19 grantees must provide to receive grants under this section.  
20 The requirement shall specify the extent to which any  
21 match may be provided in kind.

22 **SEC. 302. SELECTION PROCESS.**

23 (a) APPLICATION.—An institution of higher edu-  
24 cation (or a consortium thereof) seeking funding under  
25 this title shall submit an application to the Director at

1 such time, in such manner, and containing such informa-  
2 tion as the Director may require. The application shall in-  
3 clude, at a minimum a description of—

4 (1) the initial research projects that will be un-  
5 dertaken by the Center and the process by which  
6 new projects will be identified;

7 (2) how the Center will work with other re-  
8 search institutions and schools to broaden the na-  
9 tional research agenda on learning and teaching;

10 (3) how the Center will promote active collabo-  
11 ration among physical, biological, and social science  
12 researchers;

13 (4) how the Center will promote active partici-  
14 pation by elementary and secondary mathematics  
15 and science teachers and administrators;

16 (5) how the Center will reduce the results of its  
17 research to educational practice and assess the suc-  
18 cess of new practices;

19 (6) how non-Federal matching funds will be  
20 provided; and

21 (7) policies and procedures to ensure that Fed-  
22 eral funds will be used to supplement and not sup-  
23 plant funds that would otherwise be made available  
24 for purposes of this title.

1 (b) REVIEW OF APPLICATIONS.—In evaluating the  
2 applications submitted under subsection (a), the Director  
3 shall consider—

4 (1) the ability of the applicant to effectively  
5 carry out the research program and reduce its re-  
6 sults to effective educational practice;

7 (2) the experience of the applicant in con-  
8 ducting research on the science of teaching and  
9 learning and the capacity of the applicant to foster  
10 new multidisciplinary collaborations;

11 (3) the capacity of the applicant to attract  
12 precollege educators from a diverse array of schools  
13 and professional experiences for participation in  
14 Center activities; and

15 (4) the amount of non-Federal matching funds.

16 **SEC. 303. ANNUAL CONFERENCE.**

17 The Director shall convene an annual meeting of the  
18 Centers to foster collaboration among the Centers and to  
19 further disseminate the results of the Centers' activities.

20 **SEC. 304. AUTHORIZATION OF APPROPRIATIONS.**

21 There are authorized to be appropriated for the Na-  
22 tional Science Foundation to carry out this title  
23 \$12,000,000 for each of fiscal years 2002 through 2006.

## **TITLE IV—ROBERT NOYCE SCHOLARSHIP PROGRAM**

### **SEC. 401. DEFINITIONS.**

In this title—

(1) the term “mathematics and science teacher” means a mathematics, science, or technology teacher at the elementary or secondary school level;

(2) the term “mathematics, science, or engineering professional” means a person who holds a baccalaureate, masters, or doctoral degree in science, mathematics, or engineering and is working in that field or a related area;

(3) the term “scholarship” means an award under section 405; and

(4) the term “scholarship recipient” means a student receiving a scholarship;

(5) the term “stipend” means an award under section 406;

(6) the term “stipend recipient” means a science, mathematics or engineering professional receiving a stipend; and

(7) the term “cost of attendance” has the meaning given such term in section 472 of the Higher Education Act of 1965 (20 U.S.C. 1087ll).

1 **SEC. 402. SCHOLARSHIP PROGRAM.**

2 (a) IN GENERAL.—(1) The Director shall establish  
3 a program to award grants to institutions of higher edu-  
4 cation (or consortia thereof) to provide scholarships and  
5 programming designed to recruit and train mathematics  
6 and science teachers. Such program shall be known as the  
7 “Robert Noyce Scholarship Program”.

8 (2) Grants shall be provided under this section on a  
9 merit-reviewed competitive basis.

10 (b) USE OF GRANTS.—Grants provided under this  
11 title shall be used by institutions of higher education—

12 (1) to develop and implement a program to en-  
13 courage top college juniors and seniors majoring in  
14 mathematics, science, and engineering at the grant-  
15 ee’s institution to become mathematics and science  
16 teachers, through—

17 (A) administering scholarships in accord-  
18 ance with section 405;

19 (B) offering programs to help scholarship  
20 recipients to teach in elementary and secondary  
21 schools, including programs that will result in  
22 teacher certification; and

23 (C) offering programs to scholarship re-  
24 cipients, both before and after they receive their  
25 baccalaureate degree, to enable the recipients to  
26 become better mathematics and science teach-

1           ers, and to exchange ideas with others in their  
2           fields; or

3           (2) to develop and implement a program to en-  
4           courage science, mathematics, or engineering profes-  
5           sionals to become mathematics and science teachers,  
6           through—

7                   (A) administering stipends in accordance  
8           with section 406;

9                   (B) offering programs to help stipend re-  
10          cipients obtain teacher certification; and

11                  (C) offering programs to stipend recipi-  
12          ents, both during and after matriculation, to  
13          enable recipients to become better mathematics  
14          and science teachers and exchange ideas with  
15          others in their fields; or

16          (3) for both of the purposes described in para-  
17          graphs (1) and (2).

18          (c) MATCHING FUNDS REQUIRED.—The Director  
19          shall establish a minimum level of matching funds that  
20          grantees must provide to receive grants under this section.  
21          The requirement shall specify the extent to which any  
22          match may be provided in kind. Grant recipients shall not  
23          be required to contribute toward the cost of scholarships.

1 **SEC. 403. SELECTION PROCESS.**

2 (a) APPLICATION.—An institution of higher edu-  
3 cation (or a consortium thereof) seeking funding under  
4 this title shall submit an application to the Director at  
5 such time, in such manner, and containing such informa-  
6 tion as the Director may require. The application shall in-  
7 clude, at a minimum—

8 (1) a description of the scholarship or stipend  
9 program, or both, that the applicant intends to oper-  
10 ate, including the number of scholarships or the size  
11 and number of stipends the applicant intends to  
12 award, and the selection process that will be used in  
13 awarding the scholarships or stipends;

14 (2) evidence that the applicant has the capa-  
15 bility to administer the scholarship or stipend pro-  
16 gram in accordance with the provisions of this title;

17 (3) a description of the programming that will  
18 be offered to scholarship or stipend recipients during  
19 and after their matriculation;

20 (4) a description of how the non-Federal match-  
21 ing funds will be provided; and

22 (5) a description of policies and procedures to  
23 ensure that Federal funds will be used to supple-  
24 ment and not supplant funds that would otherwise  
25 be made available for purposes of this title.

1 (b) REVIEW OF APPLICATIONS.—In evaluating the  
2 applications submitted under subsection (a), the Director  
3 shall consider—

4 (1) the ability of the applicant to effectively  
5 carry out the program;

6 (2) the extent to which the applicant is com-  
7 mitted to making the program a central organiza-  
8 tional focus;

9 (3) the ability of the proposed programming to  
10 enable scholarship or stipend recipients to become  
11 successful mathematics and science teachers;

12 (4) the number and quality of the students that  
13 will be served by the program;

14 (5) the ability of the applicant to recruit stu-  
15 dents who would otherwise not pursue a career in  
16 teaching; and

17 (6) the amount of non-Federal matching funds.

18 **SEC. 404. AWARDS.**

19 (a) DESIGNATION.—The Director shall designate in-  
20 stitutions awarded grants under this title as “National  
21 Teacher Scholarship Centers”.

22 (b) DISTRIBUTION.—The Director shall ensure, to  
23 the extent practicable, that grants be awarded under this  
24 title in a wide range of geographic areas and to prepare



1 students for jobs in rural, suburban, and urban local edu-  
2 cational agencies.

3 (c) DURATION.—Grants awarded under this title  
4 shall be for a period of 10 years.

5 **SEC. 405. SCHOLARSHIP REQUIREMENTS.**

6 (a) IN GENERAL.—Scholarships under this title shall  
7 be available only to students who are—

8 (1) majoring in science, mathematics, or engi-  
9 neering; and

10 (2) in the last 2 years of a baccalaureate degree  
11 program.

12 (b) SELECTION.—Individuals shall be selected to re-  
13 ceive scholarships primarily on the basis of academic  
14 merit, with consideration given to financial need and to  
15 the goal of promoting the participation of minorities,  
16 women, and people with disabilities.

17 (c) AMOUNT.—Scholarships under this title shall be  
18 in the amount of \$7,500 per year, or the cost of attend-  
19 ance, whichever is less. Individuals may receive a max-  
20 imum of 2 years of scholarship support.

21 (d) SERVICE OBLIGATION.—If an individual receives  
22 a scholarship, that individual shall be required to com-  
23 plete, within 6 years after graduation from the bacca-  
24 laureate degree program for which the award was made,  
25 2 years of service as a mathematics or science teacher for

1 each year an award was received. Service required under  
2 this subsection shall be performed at a school receiving  
3 assistance under chapter 1 of title I of the Elementary  
4 and Secondary Education Act of 1965 (Public Law 89–  
5 10).

6 **SEC. 406. STIPENDS.**

7 (a) IN GENERAL.—Stipends under this title shall be  
8 available only to mathematics, science, and engineering  
9 professionals who, while receiving the stipend, are enrolled  
10 in a program to receive certification to teach.

11 (b) SELECTION.—Individuals shall be selected to re-  
12 ceive stipends under this title primarily on the basis of  
13 academic merit, with consideration given to financial need  
14 and to the goal of promoting the participation of minori-  
15 ties, women, and people with disabilities.

16 (c) AMOUNT.—Stipends under this title shall be for  
17 an amount of up to \$7,500 per year, but in no event more  
18 than the cost of tuition. Individuals may receive a max-  
19 imum of 1 year of stipend support.

20 (d) SERVICE OBLIGATION.—If an individual receives  
21 a stipend under this title, that individual shall be required  
22 to complete, within 6 years after graduation from the pro-  
23 gram for which the award was made, 2 years of service  
24 as a mathematics or science teacher for each award re-  
25 ceived. Service required under this subsection shall be per-

1 formed at a school receiving assistance under chapter 1  
2 of title I of the Elementary and Secondary Education Act  
3 of 1965 (Public Law 89–10).

4 **SEC. 407. CONDITIONS OF SUPPORT.**

5 As a condition of acceptance of a scholarship or sti-  
6 pend under this title, a recipient shall enter into an agree-  
7 ment with the institution of higher education—

8 (1) accepting the terms of the scholarship or  
9 stipend pursuant to section 405 or 406 and section  
10 409;

11 (2) agreeing to provide the awarding institution  
12 of higher education with annual certification of em-  
13 ployment and current contact information and to  
14 participate in surveys provided by the institution of  
15 higher education as part of an ongoing assessment  
16 program; and

17 (3) establishing that the scholarship or stipend  
18 recipient shall be liable to the United States for any  
19 amount that is required to be repaid in accordance  
20 with the provisions of section 409.

21 **SEC. 408. COLLECTION FOR NONCOMPLIANCE.**

22 (a) **MONITORING COMPLIANCE.**—An institution of  
23 higher education (or consortium thereof) receiving a grant  
24 under this title shall, as a condition of participating in  
25 the program, enter into an agreement with the Director

1 to monitor the compliance of scholarship and stipend re-  
2 cipients with their respective service requirements.

3 (b) COLLECTION OF REPAYMENT.—(1) In the event  
4 that a scholarship or stipend recipient is required to repay  
5 the scholarship or stipend under section 409, the institu-  
6 tion shall be responsible for collecting the repayment  
7 amounts.

8 (2) Except as provided in paragraph (3), any repay-  
9 ment shall be returned to the Treasury of the United  
10 States.

11 (3) A grantee may retain a percentage of any repay-  
12 ment it collects to defray administrative costs associated  
13 with the collection. The Director shall establish a single,  
14 fixed percentage that will apply to all grantees.

15 **SEC. 409. FAILURE TO COMPLETE SERVICE OBLIGATION.**

16 (a) GENERAL RULE.—If an individual who has re-  
17 ceived an award under this title—

18 (1) fails to maintain an acceptable level of aca-  
19 demic standing in the educational institution in  
20 which the individual is enrolled, as determined by  
21 the National Science Foundation;

22 (2) is dismissed from such educational institu-  
23 tion for disciplinary reasons;

1           (3) withdraws from the baccalaureate degree  
2           program for which the award was made before the  
3           completion of such program;

4           (4) declares that the individual does not intend  
5           to fulfill his service obligation under this title; or

6           (5) fails to fulfill the service obligation of the  
7           individual under this title,

8   such individual shall be liable to the United States as pro-  
9   vided in subsection (b).

10       (b) AMOUNT OF REPAYMENT.—(1) If a circumstance  
11       described in subsection (a)(1), (2), (3), or (4) occurs be-  
12       fore the completion of one year of a service obligation  
13       under this title, the United States shall be entitled to re-  
14       cover from the individual, within one year after the date  
15       of the occurrence of such circumstance, an amount equal  
16       to—

17           (A) the total amount of awards received by  
18       such individual under this title; plus

19           (B) the interest on such amounts which would  
20       be payable if at the time the amounts were received  
21       they were loans bearing interest at the maximum  
22       legal prevailing rate, as determined by the Treasurer  
23       of the United States,  
24       multiplied by 3.

1       (2) If a circumstance described in subsection (a)(1),  
2 (2), (3), or (4) occurs after the completion of one year  
3 of a service obligation under this title, but before the com-  
4 pletion of the second year of such service obligation, the  
5 United States shall be entitled to recover from the indi-  
6 vidual, within one year after the date of the occurrence  
7 of such circumstance, an amount equal to—

8           (A) the total amount of awards received by  
9 such individual under this title minus \$3,750; plus

10          (B) the interest on such amounts which would  
11 be payable if at the time the amounts were received  
12 they were loans bearing interest at the maximum  
13 legal prevailing rate, as determined by the Treasurer  
14 of the United States,  
15 multiplied by 3.

16       (3) If a circumstance described in subsection (a)(1),  
17 (2), (3), or (4) occurs after the completion of two years  
18 of a service obligation under this title, but before the com-  
19 pletion of the third year of such service obligation, the  
20 United States shall be entitled to recover from the indi-  
21 vidual, within one year after the date of the occurrence  
22 of such circumstance, an amount equal to—

23           (A) the total amount of awards received by  
24 such individual under this title minus \$7,500; plus

1           (B) the interest on such amounts which would  
2       be payable if at the time the amounts were received  
3       they were loans bearing interest at the maximum  
4       legal prevailing rate, as determined by the Treasurer  
5       of the United States,  
6 multiplied by 3.

7       (4) If a circumstance described in subsection (a)(1),  
8       (2), (3), or (4) occurs after the completion of three years  
9       of a service obligation under this title, but before the com-  
10      pletion of the fourth year of such service obligation, the  
11      United States shall be entitled to recover from the indi-  
12      vidual, within one year after the date of the occurrence  
13      of such circumstance, an amount equal to—

14           (A) the total amount of awards received by  
15      such individual under this title minus \$11,250; plus

16           (B) the interest on such amounts which would  
17      be payable if at the time the amounts were received  
18      they were loans bearing interest at the maximum  
19      legal prevailing rate, as determined by the Treasurer  
20      of the United States,  
21 multiplied by 3.

22       (c) EXCEPTIONS.—(1) The National Science Founda-  
23      tion may provide for the partial or total waiver or suspen-  
24      sion of any service obligation or payment by an individual  
25      under this title whenever compliance by the individual is

1 impossible or would involve extreme hardship to the indi-  
2 vidual, or if enforcement of such obligation with respect  
3 to the individual would be unconscionable.

4       (2) Any obligation of an individual under this title  
5 for payment under subsection (b) may be released by a  
6 discharge in bankruptcy under title 11, United States  
7 Code, only if such discharge is granted after the expiration  
8 of the 5-year period beginning on the first date that such  
9 payment is required.

10 **SEC. 410. AUTHORIZATION OF APPROPRIATIONS.**

11       (a) IN GENERAL.—There are authorized to be appro-  
12 priated to the National Science Foundation to carry out  
13 this title \$20,000,000 for each of fiscal years 2002  
14 through 2005.

15       (b) SPECIFIC APPROPRIATIONS.—There are author-  
16 ized to be appropriated to the National Science Founda-  
17 tion to support the activities described in subsections  
18 (b)(1)(A) and (C) and (b)(2)(A) and (C) of section 402,  
19 such sums as may be necessary for each of fiscal years  
20 2006 through 2011.



1 **TITLE V—SCIENCE, MATHE-**  
 2 **MATICS, ENGINEERING, AND**  
 3 **TECHNOLOGY BUSINESS EDU-**  
 4 **CATION CONFERENCE**

5 **SEC. 501. REQUIREMENT TO CONVENE CONFERENCE.**

6 (a) IN GENERAL.—Not later than 1 year after the  
 7 date of the enactment of this Act, the Director of the Of-  
 8 fice of Science and Technology Policy shall convene a con-  
 9 ference on improving kindergarten through 12th grade  
 10 science, mathematics, and technology education.

11 (b) PARTICIPANTS.—The Director of the Office of  
 12 Science and Technology Policy shall ensure that partici-  
 13 pants in the conference include, at a minimum—

- 14 (1) representatives of private industry;
- 15 (2) representatives from Federal, State, and  
 16 local governments;
- 17 (3) elementary and secondary mathematics,  
 18 science, and technology teachers;
- 19 (4) administrators from local educational agen-  
 20 cies;
- 21 (5) publishers of science, mathematics, engi-  
 22 neering, and technology textbooks and software;
- 23 (6) professional scientists, mathematicians, and  
 24 engineers;
- 25 (7) students; and

1           (8) any other stakeholders the Director of the  
2       Office of Science and Technology Policy determines  
3       would provide useful participation in the conference.

4       (c) PURPOSES.—The purposes of the conference shall  
5   be to—

6           (1) share information on successful science,  
7       mathematics, engineering, and technology education  
8       programs; and

9           (2) identify strategies for expanding the partici-  
10      pation of the private sector in elementary and sec-  
11      ondary mathematics and science education reform.

12      (d) REPORT AND PUBLICATION.—At the conclusion  
13   of the conference the Director of the Office of Science and  
14   Technology Policy shall—

15           (1) transmit to the Committee on Science of the  
16      House of Representatives and to the Committee on  
17      Commerce, Science, and Transportation of the Sen-  
18      ate a report on the outcome and conclusions of the  
19      conference, including recommendations for any legis-  
20      lation that could promote improvement in elemen-  
21      tary and secondary science, mathematics, and tech-  
22      nology education; and

23           (2) ensure that a similar report is published  
24      and distributed as widely as possible to people inter-

1       ested in science, mathematics, engineering, and tech-  
2       nology education.

3       (e) AUTHORIZATION OF APPROPRIATIONS.—There  
4       are authorized to be appropriated for the Office of Science  
5       and Technology Policy to carry out this title \$300,000 for  
6       fiscal year 2002.

7       **TITLE VI—REQUIREMENTS FOR**  
8       **RESEARCH CENTERS**

9       **SEC. 601. REQUIREMENTS FOR RESEARCH CENTERS.**

10       The Director shall ensure that any National Science  
11       Foundation program that awards grants for the establish-  
12       ment of research centers at institutions of higher edu-  
13       cation after the date of the enactment of this Act—

14               (1) requires that every center offer programs  
15       for elementary and secondary mathematics and  
16       science teachers and students to increase their un-  
17       derstanding of the field in which the center special-  
18       izes; and

19               (2) uses the quality of a center's proposed  
20       precollege education programs as a criterion in de-  
21       termining grant awards.

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