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1ST SESSION

H. R. 1858

IN THE SENATE OF THE UNITED STATES

JULY 31, 2001

Received; read twice and referred to the Committee on Health, Education,
Labor, and Pensions

AN ACT

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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “National Mathematics
3 and Science Partnerships Act”.

4 **SEC. 2. FINDINGS.**

5 The Congress finds the following:

6 (1) 12 years ago the President of the United
7 States convened the Nation’s Governors to establish
8 common goals for the improvement of elementary
9 and secondary education.

10 (2) Among the National Education Goals estab-
11 lished was the goal that by the year 2000 United
12 States students would be first in the world in mathe-
13 matics and science achievement.

14 (3) Despite these goals, 8th graders in the
15 United States showed just average performance in
16 mathematics and science in the Third International
17 Mathematics and Science Study-Repeat and dem-
18 onstrated lower relative performance than the cohort
19 of 4th graders 4 years earlier.

20 (4) The United States must redouble its efforts
21 to provide all of its students with a world-class edu-
22 cation in mathematics, science, engineering, and
23 technology.

24 (5) The American economy has become the
25 most robust in the world, not through state planning
26 and government intervention, but through the hard

1 work and innovation of its citizens. This success is
2 founded in our constitutional tradition of respect for
3 individual liberty to pursue personal career objec-
4 tives.

5 **SEC. 3. DEFINITIONS.**

6 In this Act—

7 (1) the term “Director” means the Director of
8 the National Science Foundation;

9 (2) the term “institution of higher education”
10 has the meaning given such term by section 101 of
11 the Higher Education Act of 1965 (20 U.S.C.
12 1001);

13 (3) the term “eligible nonprofit organization”
14 means a nonprofit research institute or a nonprofit
15 professional association with demonstrated experi-
16 ence delivering mathematics or science education as
17 determined by the Director;

18 (4) the term “local educational agency” has the
19 meaning given such term by section 14101(19) of
20 the Elementary and Secondary Education Act of
21 1965 (20 U.S.C. 8801(19));

22 (5) the term “State educational agency” has
23 the meaning given such term by section 14101(29)
24 of the Elementary and Secondary Education Act of
25 1965 (20 U.S.C. 8801(29));

1 (6) the term “elementary school” has the mean-
2 ing given that term by section 14101(14) of the Ele-
3 mentary and Secondary Education Act of 1965 (20
4 U.S.C. 8801(14)); and

5 (7) the term “secondary school” has the mean-
6 ing given that term by section 14101(26) of the Ele-
7 mentary and Secondary Education Act of 1965 (20
8 U.S.C. 8801(26)).

9 **SEC. 4. DUPLICATION OF PROGRAMS.**

10 (a) IN GENERAL.—The Director of the National
11 Science Foundation shall review the education programs
12 of the National Science Foundation that are in operation
13 as of the date of enactment of this Act to determine
14 whether any of such programs duplicate the programs au-
15 thorized in this Act.

16 (b) IMPLEMENTATION.—(1) As programs authorized
17 in this Act are implemented, the Director shall terminate
18 any existing duplicative program or merge the duplicative
19 program into a program authorized in this Act.

20 (2) The Director shall not establish any new program
21 that duplicates a program that has been implemented pur-
22 suant to this Act.

23 (c) REPORT.—(1) The Director of the Office of
24 Science and Technology Policy shall review the education

1 programs of the National Science Foundation to ensure
2 compliance with the provisions of this section.

3 (2) Not later than one year after the date of the en-
4 actment of this Act, the Director of the Office of Science
5 and Technology Policy shall complete a report on the re-
6 view carried out under this subsection and shall submit
7 the report to the Committee on Science, the Committee
8 on Education and the Workforce, and the Committee on
9 Appropriations of the House of Representatives.

10 (3) Beginning one year after the date of enactment
11 of this Act, the Director of the Office of Science and Tech-
12 nology Policy, shall, as part of the annual budget submis-
13 sion to Congress, submit an updated version of the report
14 required by paragraph (2).

15 **SEC. 5. MATCHING REQUIREMENTS.**

16 The Director may establish matching fund require-
17 ments for any programs authorized by this Act except
18 those established in title IV.

19 **SEC. 6. COORDINATION.**

20 In carrying out the activities authorized by this Act,
21 the Director of the National Science Foundation shall con-
22 sult and coordinate with the Secretary of Education to en-
23 sure close cooperation with programs authorized under the
24 Elementary and Secondary Education Act of 1965 (Public
25 Law 89–10).

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 one or more
19 local educational agencies that may also include a State
20 educational 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, including pro-
16 grams that recruit and train undergraduate and
17 graduate students to provide technical support to
18 teachers;

19 (4) developing distance learning programs for
20 teachers or students, including developing courses,
21 curricular materials and other resources for the in-
22 service professional development of teachers that are
23 made available to teachers through the Internet;

24 (5) offering teacher preparation and certifi-
25 cation programs for professional mathematicians,

1 scientists, and engineers who wish to begin a career
2 in teaching;

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

5 (7) developing or adapting elementary and sec-
6 ondary school curricular materials, aligned to State
7 standards, that incorporate contemporary research
8 on the science of learning;

9 (8) developing undergraduate mathematics and
10 science courses for education majors;

11 (9) using mathematicians, scientists, and engi-
12 neers employed by private businesses to help recruit
13 and train mathematics and science teachers;

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

16 (11) developing and offering mathematics or
17 science enrichment programs for students, including
18 after-school and summer programs;

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

21 (13) bringing mathematicians, scientists, and
22 engineers from business and academia into elemen-
23 tary and secondary school classrooms; and

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

1 (d) SCIENCE ENRICHMENT PROGRAMS FOR GIRLS.—
2 Activities carried out in accordance with subsections
3 (c)(11) and (12) shall include elementary and secondary
4 school programs to encourage the ongoing interest of girls
5 in science, mathematics, engineering, and technology and
6 to prepare girls to pursue undergraduate and graduate de-
7 grees and careers in science, mathematics, engineering, or
8 technology. Funds made available through awards to part-
9 nerships for the purposes of this subsection may support
10 programs for—

11 (1) encouraging girls to pursue studies in
12 science, mathematics, engineering, and technology
13 and to major in such fields in postsecondary edu-
14 cation;

15 (2) tutoring girls in science, mathematics, engi-
16 neering, and technology;

17 (3) providing mentors for girls in person and
18 through the Internet to support such girls in pur-
19 suing studies in science, mathematics, engineering,
20 and technology;

21 (4) educating the parents of girls about the dif-
22 ficulties faced by girls to maintain an interest and
23 desire to achieve in science, mathematics, engineer-
24 ing, and technology, and enlisting the help of par-
25 ents in overcoming these difficulties; and

1 (5) acquainting girls with careers in science,
2 mathematics, engineering, and technology and en-
3 couraging girls to plan for careers in such fields.

4 (e) RESEARCH IN SECONDARY SCHOOLS.—Activities
5 carried out in accordance with subsection (c)(11) may in-
6 clude support for research projects performed by students
7 at secondary schools. Uses of funds made available
8 through awards to partnerships for purposes of this sub-
9 section may include—

10 (1) training secondary school mathematics and
11 science teachers in the design of research projects
12 for students;

13 (2) establishing a system for students and
14 teachers involved in research projects funded under
15 this section to exchange information about their
16 projects and research results; and

17 (3) assessing the educational value of the stu-
18 dent research projects by such means as tracking
19 the academic performance and choice of academic
20 majors of students conducting research.

21 (f) STIPENDS.—Grants awarded under this section
22 may be used to provide stipends for teachers or students
23 participating in training or research activities that would
24 not be part of their typical classroom activities.

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;

18 (B) how such activities will be based on a
19 review of relevant research;

20 (C) why such activities are expected to im-
21 prove student performance and strengthen the
22 quality of mathematics and science instruction;
23 and

24 (D) in the case of activities carried out in
25 accordance with section 101(d), how such ac-
26 tivities will encourage the interest of women

1 and minorities in mathematics, science, engi-
2 neering, and technology and will help prepare
3 women and minorities to pursue postsecondary
4 studies in these fields;

5 (3) a description of the number, size, and na-
6 ture of any stipends that will be provided to students
7 or teachers and the reasons such stipends are need-
8 ed;

9 (4) how the partnership will serve as a catalyst
10 for reform of mathematics and science education
11 programs; and

12 (5) how the partnership will assess its success.

13 (b) REVIEW OF APPLICATIONS.—In evaluating the
14 applications submitted under subsection (a), the Director
15 shall consider, at a minimum—

16 (1) the ability of the partnership to effectively
17 carry out the proposed programs;

18 (2) the extent to which the members of the
19 partnership are committed to making the partner-
20 ship a central organizational focus;

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

24 (4) the degree to which such activities are
25 aligned with State or local standards; and

1 (5) the likelihood that the partnership will dem-
2 onstrate activities that can be widely implemented as
3 part of larger scale reform efforts.

4 (c) AWARDS.—(1) The Director shall ensure, to the
5 extent practicable, that partnership grants be awarded
6 under section 101 in a wide range of geographic areas and
7 that the partnership program include rural, suburban, and
8 urban local educational agencies.

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

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

13 **SEC. 103. ACCOUNTABILITY AND DISSEMINATION.**

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

17 (1) use a common set of benchmarks and as-
18 sessment tools to identify best practices and mate-
19 rials developed and demonstrated by the partner-
20 ships; and

21 (2) to the extent practicable, compare the effec-
22 tiveness of practices and materials developed and
23 demonstrated by the partnerships authorized under
24 this subtitle with those of partnerships funded by
25 other State or Federal agencies.

1 (b) DISSEMINATION OF RESULTS.—(1) The results
2 of the evaluations required under subsection (a) shall be
3 made available to the public, including through the Na-
4 tional Science, Mathematics, Engineering, and Technology
5 Education Digital Library, and shall be provided to the
6 Committee on Science of the House of Representatives
7 and the Committee on Health, Education, Labor, and
8 Pensions and the Committee on Commerce, Science, and
9 Transportation of the Senate.

10 (2) Materials developed under the program estab-
11 lished under section 101 that are demonstrated to be ef-
12 fective shall be made available through the National
13 Science, Mathematics, Engineering, and Technology Edu-
14 cation Digital Library.

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

18 **SEC. 104. AUTHORIZATION OF APPROPRIATIONS.**

19 There are authorized to be appropriated to the Na-
20 tional Science Foundation to carry out this subtitle
21 \$200,000,000 for each of fiscal years 2002 through 2006.

1 **Subtitle B—Teacher Research**
2 **Scholarship Program**

3 **SEC. 111. PROGRAM AUTHORIZED.**

4 (a) **IN GENERAL.**—(1) The Director shall establish
5 a program to award grants to institutions of higher edu-
6 cation or eligible nonprofit organizations (or consortia
7 thereof) to provide research opportunities in mathematics,
8 science, and engineering for elementary or secondary
9 school teachers of mathematics or science. Such institu-
10 tions of higher education or eligible nonprofit organiza-
11 tions may include one or more businesses or Federal or
12 State laboratories as partners under the program.

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

15 (b) **PROGRAM COMPONENTS.**—Grant recipients
16 under this section—

17 (1) shall recruit and select teachers and provide
18 such teachers with opportunities to conduct research
19 in academic, business, or government laboratories;

20 (2) shall ensure that the teachers have mentors
21 and other programming support to ensure that their
22 research experience will contribute to their under-
23 standing of mathematics, science, and engineering
24 and improve their performance in the classroom;

1 (3) shall provide teachers with a scholarship sti-
2 pend; and

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

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

8 (2) The Director shall issue guidelines specifying the
9 minimum and maximum amounts of stipends recipients
10 may provide to teachers under this section.

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

14 **SEC. 112. SELECTION PROCESS.**

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

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

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

4 (3) a description of the number, types, and
5 amounts of the scholarships that the applicant in-
6 tends to offer to participating teachers; and

7 (4) a description of the programming support
8 that will be provided to participating teachers.

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

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; and

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

20 (c) AWARDS.—(1) The Director shall ensure, to the
21 extent practicable, that grants be awarded under this sub-
22 title in a wide range of geographic areas and to assist
23 teachers from rural, suburban, and urban local edu-
24 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, mathematics, engineering, and tech-
18 nology educational resources, materials, practices, and
19 policies through the Internet and other digital tech-
20 nologies. The expanded Digital Library shall—

21 (1) contain an Internet-based repository of cur-
22 ricular materials, practices, and teaching modules;

23 (2) contain, to the extent practicable, an Inter-
24 net-based repository of information about national
25 and regional conferences related to the improvement

1 of elementary and secondary mathematics, science,
2 engineering, and technology education, including, if
3 appropriate, links to materials generated by those
4 conferences;

5 (3) provide users of the Digital Library with ac-
6 cess to all materials in the Digital Library through
7 a single entry point;

8 (4) contain only materials that have been peer-
9 reviewed and tested to ensure factual accuracy and
10 effectiveness and that are aligned with recognized
11 State and other widely recognized professional and
12 technical mathematics and science standards;

13 (5) present materials in a format that is con-
14 sistent, facilitates ease of comparison and use by
15 classroom teachers, and contains appropriate links
16 to other Federal educational clearinghouses; and

17 (6) provide materials related to mathematics
18 and science partnership programs, including—

19 (A) links to all of the programs developed
20 through the mathematics and science partner-
21 ships established under subtitle A of title I;

22 (B) data related to assessment and evalua-
23 tion and final program reports developed under
24 subtitle A of title I, including both positive and
25 negative outcomes of the program;

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

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

7 **SEC. 202. GRANTS AND CONTRACT.**

8 (a) GRANTS.—The Director may award grants to in-
9 stitutions of higher education or other qualified entities—

10 (1) to design all or parts of the Digital Library;

11 (2) to provide assistance to schools in the selec-
12 tion and adaptation of curricular materials, prac-
13 tices, and teaching methods made available through
14 the Digital Library; or

15 (3) to carry out the activities described in both
16 paragraphs (1) and (2).

17 Grants awarded under this subsection may cover the costs
18 of acquiring and reviewing educational materials for dis-
19 semination through the Digital Library.

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

22 (c) COMPETITIVE AWARDS.—Grants and contracts
23 shall be awarded under this section on a competitive basis.

1 **SEC. 203. CONSTRUCTION.**

2 Nothing in this Act shall affect the rights, remedies,
3 limitations, or defenses under title 17, United States
4 Code.

5 **SEC. 204. AUTHORIZATION OF APPROPRIATIONS.**

6 There are authorized to be appropriated for the Na-
7 tional Science Foundation to carry out this title
8 \$20,000,000 for each of fiscal years 2002 through 2006.

9 **TITLE III—STRATEGIC EDU-**
10 **CATION RESEARCH PROGRAM**
11 **Subtitle A—Centers**

12 **SEC. 301. ESTABLISHMENT OF CENTERS FOR RESEARCH**
13 **ON LEARNING AND EDUCATION IMPROVE-**
14 **MENT.**

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

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

21 (b) PURPOSE.—The purpose of the Centers shall be
22 to conduct and evaluate research in cognitive science, edu-
23 cation and related fields and to develop ways in which the
24 results of such research can be applied in elementary and
25 secondary classrooms to improve the teaching of mathe-
26 matics and science.

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

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

11 **SEC. 302. SELECTION PROCESS.**

12 (a) APPLICATION.—An institution of higher edu-
13 cation (or a consortium of such institutions) seeking fund-
14 ing under this title shall submit an application to the Di-
15 rector at such time, in such manner, and containing such
16 information as the Director may require. The application
17 shall include, at a minimum, a description of—

18 (1) the initial research projects that will be un-
19 dertaken by the Center and the process by which
20 new projects will be identified;

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

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

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

7 (5) how the Center will reduce the results of its
8 research to educational practice and assess the suc-
9 cess of new practices.

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

13 (1) the ability of the applicant to effectively
14 carry out the research program and reduce its re-
15 sults to effective educational practice;

16 (2) the experience of the applicant in con-
17 ducting research on the science of teaching and
18 learning and the capacity of the applicant to foster
19 new multidisciplinary collaborations;

20 (3) the capacity of the applicant to attract
21 precollege educators from a diverse array of schools
22 and professional experiences for participation in
23 Center activities; and

24 (4) the capacity of the applicant to attract and
25 provide adequate support for graduate students to

1 pursue research at the intersection of educational
2 practice and basic research on human cognition and
3 learning.

4 (c) AWARDS.—The Director shall ensure, to the ex-
5 tent practicable, that the Centers funded under this sec-
6 tion conduct research and develop educational practices
7 designed to improve the educational performance of a
8 broad range of students, including those from groups
9 underrepresented in mathematics, science, and engineer-
10 ing.

11 **SEC. 303. ANNUAL CONFERENCE.**

12 The Director shall convene an annual meeting of the
13 Centers to foster collaboration among the Centers and to
14 further disseminate the results of the Centers' activities.

15 **SEC. 304. AUTHORIZATION OF APPROPRIATIONS.**

16 There are authorized to be appropriated for the Na-
17 tional Science Foundation to carry out this title
18 \$12,000,000 for each of fiscal years 2002 through 2006.

19 **Subtitle B—Fellowships**

20 **SEC. 311. EDUCATION RESEARCH TEACHER FELLOWSHIPS.**

21 (a) ESTABLISHMENT.—(1) The Director shall estab-
22 lish a program to award grants to institutions of higher
23 education or eligible nonprofit entities (or consortia there-
24 of) to provide research opportunities related to the science

1 of learning to elementary and secondary school teachers
2 of science and mathematics.

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

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

7 (1) shall recruit and select teachers and provide
8 such teachers with opportunities to conduct research
9 in the fields of—

10 (A) brain research as a foundation for re-
11 search on human learning;

12 (B) behavioral, cognitive, affective, and so-
13 cial aspects of human learning;

14 (C) science and mathematics learning in
15 formal and informal educational settings; or

16 (D) learning in complex educational sys-
17 tems;

18 (2) shall ensure that participating teachers have
19 mentors and other programming support to ensure
20 that their research experience will contribute to their
21 understanding of the science of learning;

22 (3) shall provide programming, guidance, and
23 support to ensure that participating teachers dis-
24 seminate information about the current state of edu-
25 cation research and its implications for classroom

1 practice to other elementary and secondary edu-
2 cators and can use that information to improve their
3 performance in the classroom;

4 (4) shall provide participating teachers with a
5 scholarship stipend; and

6 (5) may provide room and board for residential
7 programs.

8 (c) USE OF FUNDS.—(1) Not more than 25 percent
9 of the funds provided under a grant under this section
10 may be used for programming support for participating
11 teachers.

12 (2) The Director shall issue guidelines specifying the
13 minimum or maximum amounts of stipends grant recipi-
14 ents may provide to teachers under this section.

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

18 (e) APPLICATION.—An institution of higher edu-
19 cation or eligible nonprofit entity (or a consortium thereof)
20 seeking funding under this section shall submit an applica-
21 tion to the Director at such time, in such manner, and
22 containing such information as the Director may require.
23 The application shall include, at a minimum—

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

4 (2) a description of how the applicant will re-
5 cruit teachers to participate in the program, and the
6 criteria that will be used to select the participants;

7 (3) a description of the number, types, and
8 amounts of the scholarships that the applicant in-
9 tends to offer to participating teachers; and

10 (4) a description of the programming support
11 that will be provided to participating teachers to en-
12 hance their research experience and to enable them
13 to educate their peers about the value, findings, and
14 implications of education research.

15 (f) REVIEW OF APPLICANTS.—In evaluating the ap-
16 plications submitted under subsection (e), the Director
17 shall consider, at a minimum—

18 (1) the ability of the applicant to effectively
19 carry out the proposed program;

20 (2) the extent to which the applicant is com-
21 mitted to making the program a central organiza-
22 tional focus; and

23 (3) the likelihood that the research experiences
24 and programming to be offered by the applicant will
25 improve elementary and secondary education.

1 (g) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to the National Science
3 Foundation for carrying out this section \$5,000,000 for
4 each of fiscal years 2002 through 2004.

5 **TITLE IV—ROBERT NOYCE**
6 **SCHOLARSHIP PROGRAM**

7 **SEC. 401. DEFINITIONS.**

8 In this title—

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

12 (2) the term “mathematics, science, or engi-
13 neering professional” means a person who holds a
14 baccalaureate, masters, or doctoral degree in science,
15 mathematics, or engineering and is working in that
16 field or a related area;

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

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

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

23 (6) the term “stipend recipient” means a
24 science, mathematics, or engineering professional re-
25 ceiving a stipend; and

1 (7) the term “cost of attendance” has the
2 meaning given such term in section 472 of the High-
3 er Education Act of 1965 (20 U.S.C. 1087ll).

4 **SEC. 402. SCHOLARSHIP PROGRAM.**

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

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

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

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

20 (A) administering scholarships in accord-
21 ance with section 405;

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

1 (C) offering programs to scholarship re-
2 cipients, both before and after they receive their
3 baccalaureate degree, to enable the recipients to
4 become better mathematics and science teach-
5 ers, and to exchange ideas with others in their
6 fields; or

7 (2) to develop and implement a program to en-
8 courage science, mathematics, or engineering profes-
9 sionals to become mathematics and science teachers,
10 through—

11 (A) administering stipends in accordance
12 with section 406;

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

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

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

22 **SEC. 403. SELECTION PROCESS.**

23 (a) APPLICATION.—An institution of higher edu-
24 cation (or a consortium of such institutions) seeking fund-
25 ing under this title shall submit an application to the Di-

1 rector at such time, in such manner, and containing such
2 information as the Director may require. The application
3 shall include, at a minimum—

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

10 (2) evidence that the applicant has the capa-
11 bility to administer the scholarship or stipend pro-
12 gram in accordance with the provisions of this title;
13 and

14 (3) a description of the programming that will
15 be offered to scholarship or stipend recipients during
16 and after their matriculation.

17 (b) REVIEW OF APPLICATIONS.—In evaluating the
18 applications submitted under subsection (a), the Director
19 shall consider, at a minimum—

20 (1) the ability of the applicant to effectively
21 carry out the program;

22 (2) the extent to which the applicant is com-
23 mitted to making the program a central organiza-
24 tional focus;

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

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

6 (5) the ability of the applicant to recruit stu-
7 dents who would otherwise not pursue a career in
8 teaching.

9 **SEC. 404. AWARDS.**

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

13 (b) DISTRIBUTION.—The Director shall ensure, to
14 the extent practicable, that grants be awarded under this
15 title in a wide range of geographic areas and to prepare
16 students for jobs in rural, suburban, and urban local edu-
17 cational agencies.

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

20 **SEC. 405. SCHOLARSHIP REQUIREMENTS.**

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

23 (1) majoring in science, mathematics, or engi-
24 neering; and

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

3 (b) SELECTION.—Individuals shall be selected to re-
4 ceive scholarships primarily on the basis of academic
5 merit, with consideration given to financial need and to
6 the goal of promoting the participation of minorities,
7 women, and people with disabilities.

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

12 (d) SERVICE OBLIGATION.—If an individual receives
13 a scholarship, that individual shall be required to com-
14 plete, within 6 years after graduation from the bacca-
15 laureate degree program for which the scholarship was
16 awarded, 2 years of service as a mathematics or science
17 teacher for each year a scholarship was received. Service
18 required under this subsection shall be performed at a
19 school receiving assistance under chapter 1 of title I of
20 the Elementary and Secondary Education Act of 1965
21 (Public Law 89–10).

22 **SEC. 406. STIPENDS.**

23 (a) IN GENERAL.—Stipends under this title shall be
24 available only to mathematics, science, and engineering

1 professionals who, while receiving the stipend, are enrolled
2 in a program to receive certification to teach.

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

8 (c) AMOUNT.—Stipends under this title shall be for
9 an amount of up to \$7,500 per year, but in no event more
10 than the cost of attendance. Individuals may receive a
11 maximum of 1 year of stipend support.

12 (d) SERVICE OBLIGATION.—If an individual receives
13 a stipend under this title, that individual shall be required
14 to complete, within 6 years after graduation from the pro-
15 gram for which the stipend was awarded, 2 years of serv-
16 ice as a mathematics or science teacher for each year a
17 stipend was received. Service required under this sub-
18 section shall be performed at a school receiving assistance
19 under chapter 1 of title I of the Elementary and Sec-
20 ondary Education Act of 1965 (Public Law 89–10).

21 **SEC. 407. CONDITIONS OF SUPPORT.**

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

1 (1) accepting the terms of the scholarship or
2 stipend pursuant to sections 405 and 409 or section
3 406;

4 (2) agreeing to provide the awarding institution
5 of higher education with annual certification of em-
6 ployment and current contact information and to
7 participate in surveys provided by the institution of
8 higher education as part of an ongoing assessment
9 program; and

10 (3) establishing that any scholarship recipient
11 shall be liable to the United States for any amount
12 that is required to be repaid in accordance with the
13 provisions of section 409.

14 **SEC. 408. COLLECTION FOR NONCOMPLIANCE.**

15 (a) **MONITORING COMPLIANCE.**—An institution of
16 higher education (or consortium thereof) receiving a grant
17 under this title shall, as a condition of participating in
18 the program, enter into an agreement with the Director
19 to monitor the compliance of scholarship and stipend re-
20 cipients with their respective service requirements.

21 (b) **COLLECTION OF REPAYMENT.**—(1) In the event
22 that a scholarship recipient is required to repay the schol-
23 arship under section 409, the institution shall be respon-
24 sible for collecting the repayment amounts.

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

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

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

9 (a) GENERAL RULE.—If an individual who has re-
10 ceived a scholarship under this title—

11 (1) fails to maintain an acceptable level of aca-
12 demic standing in the educational institution in
13 which the individual is enrolled, as determined by
14 the National Science Foundation;

15 (2) is dismissed from such educational institu-
16 tion for disciplinary reasons;

17 (3) withdraws from the baccalaureate degree
18 program for which the award was made before the
19 completion of such program;

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

22 (5) fails to fulfill the service obligation of the
23 individual under this title,

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

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

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

9 (B) the interest on such amounts which would
10 be payable if at the time the amounts were received
11 they were loans bearing interest at the maximum
12 legal prevailing rate, as determined by the Treasurer
13 of the United States,
14 multiplied by 2.

15 (2) If a circumstance described in subsection (a)(4)
16 or (a)(5) occurs after the completion of one year of a serv-
17 ice obligation under this title, the United States shall be
18 entitled to recover from the individual, within one year
19 after the date of the occurrence of such circumstance, an
20 amount equal to—

21 (A) the total amount of awards received by
22 such individual under this title minus \$3,750 for
23 each full year of service completed; plus

24 (B) the interest on such amounts which would
25 be payable if at the time the amounts were received

1 they were loans bearing interest at the maximum
2 legal prevailing rate, as determined by the Treasurer
3 of the United States.

4 (c) EXCEPTIONS.—(1) The National Science Founda-
5 tion may provide for the partial or total waiver or suspen-
6 sion of any service obligation or payment by an individual
7 under this title whenever compliance by the individual is
8 impossible or would involve extreme hardship to the indi-
9 vidual, or if enforcement of such obligation with respect
10 to the individual would be unconscionable.

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

17 **SEC. 410. REPORT.**

18 (a) DATA COLLECTION.—Institutions receiving
19 grants under this title shall supply to the Director any
20 relevant statistical and demographic data on scholarship
21 recipients and stipend recipients the Director may request,
22 including information on employment required by section
23 407.

24 (b) ASSESSMENT.—Not later than 7 years after the
25 date of the enactment of this Act, the Director shall sub-

1 mit to Congress a report assessing the impact of the im-
2 plementation of this title on drawing into teaching top
3 mathematics and science students, including students
4 from groups underrepresented in mathematics, science,
5 and engineering.

6 **SEC. 411. AUTHORIZATION OF APPROPRIATIONS.**

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

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

17 **TITLE V—REQUIREMENTS FOR**
18 **RESEARCH CENTERS**

19 **SEC. 501. REQUIREMENTS FOR RESEARCH CENTERS.**

20 The Director shall ensure that any National Science
21 Foundation program that awards grants for the establish-
22 ment of research centers at institutions of higher edu-
23 cation after the date of the enactment of this Act—

24 (1) requires that every center offer programs
25 for elementary and secondary mathematics and

1 science teachers and students to increase their un-
2 derstanding of the field in which the center special-
3 izes; and

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

7 **TITLE VI—EDUCATIONAL**
8 **TECHNOLOGIES**

9 **Subtitle A—Research Centers**

10 **SEC. 601. EDUCATIONAL TECHNOLOGY RESEARCH CEN-**
11 **TERS.**

12 (a) IN GENERAL.—(1) The Director shall establish
13 a program to award grants to institutions of higher edu-
14 cation (or consortia thereof) to establish centers to evalu-
15 ate and improve the effectiveness of information tech-
16 nologies in elementary and secondary mathematics and
17 science education.

18 (2) Grants shall be awarded under this subtitle on
19 a merit-reviewed competitive basis.

20 (b) ACTIVITIES.—Centers established under this sub-
21 title shall, at a minimum—

22 (1) identify educational approaches and tech-
23 niques that are based on the use of information
24 technology and that have the potential for being ef-
25 fective in classroom settings;

1 (2) develop methods to measure the effective-
2 ness of various applications of information tech-
3 nology in mathematics and science education, includ-
4 ing methods to measure student performance;

5 (3) evaluate the effectiveness of the use of tech-
6 nology in elementary and secondary mathematics
7 and science education in a variety of classroom set-
8 tings;

9 (4) identify the key variables that influence
10 educational effectiveness and the conditions nec-
11 essary to implement successfully an approach or
12 technique determined to be educationally effective
13 for a particular educational setting;

14 (5) ensure that the results of such evaluations
15 are widely disseminated; and

16 (6) develop a program to work with local edu-
17 cational agencies to help them apply the results of
18 the research conducted under this section.

19 **SEC. 602. SELECTION PROCESS.**

20 (a) APPLICATION.—An institution of higher edu-
21 cation (or a consortium of such institutions) seeking fund-
22 ing under this subtitle shall submit an application to the
23 Director at such time, in such manner, and containing
24 such information as the Director may require. The appli-
25 cation shall include, at a minimum, a description of—

1 (1) the approaches to the use of information
2 technology that the center will initially evaluate, how
3 it chose those approaches, how it will seek out any
4 additional approaches, and how assessment proce-
5 dures would be developed and applied;

6 (2) how the center will work with local edu-
7 cational agencies to evaluate the approaches in class-
8 rooms;

9 (3) how the center will disseminate the results
10 of its work; and

11 (4) how the center will develop an outreach pro-
12 gram to work with local educational agencies to help
13 them apply the results of its research.

14 (b) REVIEW OF APPLICATIONS.—In evaluating the
15 applications submitted under subsection (a), the Director
16 shall consider, at a minimum, the ability of the applicant
17 to effectively evaluate information technology approaches
18 and to help local educational agencies apply the results
19 of those evaluations.

20 (c) AWARDS.—The Director shall ensure, to the ex-
21 tent practicable, that the program established under this
22 subtitle evaluates information technology—

23 (1) in a wide range of grade levels and geo-
24 graphic areas;

25 (2) in rural, suburban, and urban schools; and

1 **Subtitle B—Assistance**

2 **SEC. 611. EDUCATIONAL TECHNOLOGY ASSISTANCE.**

3 Section 3 of the Scientific and Advanced Technology
4 Act of 1992 (Public Law 102–476; 42 U.S.C. 1862i) is
5 amended by redesignating subsections (d), (e), (f), and (g)
6 as subsections (e), (f), (g), and (h), respectively, and by
7 inserting after subsection (c) the following new subsection:

8 “(d) EDUCATIONAL TECHNOLOGY ASSISTANCE.—

9 “(1) IN GENERAL.—The Director may make
10 awards on a competitive, merit-reviewed basis to as-
11 sociate-degree granting colleges, bachelor-degree
12 granting institutions, or education service agencies
13 (or consortia thereof) to establish centers to assist
14 elementary and secondary schools in the use of in-
15 formation technology for mathematics, science, or
16 technology instruction.

17 “(2) ACTIVITIES.—Activities of centers funded
18 under this subsection may include—

19 “(A) helping schools evaluate their need
20 for information technology;

21 “(B) training teachers on how to best use
22 information technology in instruction; and

23 “(C) providing other information and
24 training to help schools and teachers ensure
25 that they have access to appropriate informa-

1 tion technologies and are using them to max-
2 imum advantage.

3 “(3) APPLICATION.—An application to receive
4 funds under this subsection shall include, at a
5 minimum—

6 “(A) a description of the services that will
7 be provided to schools and teachers;

8 “(B) a list of the schools expected to be
9 served;

10 “(C) a description of how the applicant will
11 draw on the expertise of its faculty and stu-
12 dents to assist schools and teachers; and

13 “(D) a description of how the applicant
14 will operate the program after funding made
15 available by this subsection has expired.

16 “(4) SELECTION.—In evaluating applications
17 submitted under paragraph (3), the Director shall
18 consider, at a minimum—

19 “(A) the ability of the applicant to effec-
20 tively carry out the program;

21 “(B) the number of schools and students
22 who would be served and the their need for as-
23 sistance;

24 “(C) the extent to which the applicant has
25 worked with participating schools to ensure that

1 priority problems would be addressed by the as-
2 sistance provided under this subsection; and

3 “(D) the ability of the applicant to con-
4 tinue to provide assistance after funding under
5 this subsection has expired.

6 “(5) AWARDS.—(A) The Director shall ensure,
7 to the extent practicable, that the program estab-
8 lished by this subsection assists schools in rural,
9 suburban, and urban areas.

10 “(B) No institution shall receive funds under
11 this subsection for more than three years.

12 “(C) An institution receiving a grant under
13 subtitle A of title VI of the National Mathematics
14 and Science Partnerships Act may participate in the
15 program created by this section.

16 “(6) REPORT.—Not later than April 1, 2005,
17 the Director shall provide a report to Congress as-
18 sessing the success of the program funded under
19 this subsection and the need of schools for continued
20 assistance, and, based on the experience with the
21 program, recommending ways information tech-
22 nology assistance to schools could be made more
23 broadly available.

24 “(7) AUTHORIZATION OF APPROPRIATIONS.—
25 There are authorized to be appropriated to the Na-

1 tional Science Foundation to carry out this sub-
2 section \$5,000,000 for each of the fiscal years 2002
3 through 2004.”.

4 **TITLE VII—MISCELLANEOUS** 5 **PROVISIONS**

6 **SEC. 701. MATHEMATICS AND SCIENCE PROFICIENCY** 7 **SCHOLARSHIPS.**

8 (a) FINDINGS.—Congress finds the following:

9 (1) Proficiency in mathematics, science, and in-
10 formation technology is necessary to prepare all stu-
11 dents in the United States for participation in the
12 21st century and to guarantee that the United
13 States economy remains vibrant and competitive.

14 (2) In order to achieve such results, it is impor-
15 tant that the Federal Government shows interest in
16 economically disadvantaged students who have not
17 been provided with opportunities that will improve
18 their knowledge of mathematics, science, and tech-
19 nology.

20 (3) Many economically disadvantaged students
21 in urban and rural America share a common need
22 to receive a quality education, but often the schools
23 of such students lack the needed resources to lift
24 those students into the information age.

1 (4) The schools and businesses serving urban
2 and rural communities are strategically positioned to
3 form a unique partnership with students that will in-
4 crease their mathematics, science, and technology
5 proficiency and encourage and support their under-
6 graduate study in those fields for the benefit of the
7 Nation.

8 (b) IN GENERAL.—The Director shall establish a
9 demonstration project to encourage businesses to offer
10 scholarships to eligible students (to enable them to attend
11 institutions of higher education) by providing grants to
12 improve mathematics, science, or technology education in
13 the schools attended by the eligible students.

14 (c) USE OF FUNDS.—(1) The Director shall provide
15 grants under this section to local educational agencies on
16 a merit-reviewed, competitive basis.

17 (2) Funds awarded under this subsection may be
18 used to—

19 (A) provide teacher professional development in
20 mathematics, science, or technology;

21 (B) develop or implement mathematics, science,
22 or technology curriculums, and to purchase related
23 equipment; and

1 (C) to carry out other activities the Director de-
2 termines would improve mathematics, science, or
3 technology education.

4 (d) ELIGIBLE LOCAL EDUCATIONAL AGENCIES.—

5 For purposes of this section, a local educational agency
6 is eligible to receive a grant under this section if the
7 agency—

8 (1) provides assurances that it has executed
9 conditional agreements with representatives of the
10 private sector to provide services and funds de-
11 scribed in subsection (e); and

12 (2) agrees to enter into an agreement with the
13 Director to comply with the requirements of this sec-
14 tion.

15 (e) PRIVATE SECTOR PARTICIPATION.—The condi-
16 tional agreements referred to in subsection (d)(1) shall de-
17 scribe participation by the private sector, including—

18 (1) the donation of computer hardware, soft-
19 ware, and other technology tools;

20 (2) the establishment of internship and men-
21 toring opportunities for students who participate in
22 the mathematics, science, and information tech-
23 nology program; and

1 (3) the donation of higher education scholarship
2 funds for eligible students to continue their study of
3 mathematics, science, and information technology.

4 (f) APPLICATION.—(1) To apply for a grant under
5 this section, each eligible local educational agency shall
6 submit an application to the Director in accordance with
7 guidelines established by the Director pursuant to para-
8 graph (2).

9 (2)(A) The guidelines referred to in paragraph (1)
10 shall require, at a minimum, that the application
11 include—

12 (i) a description of proposed activities con-
13 sistent with the uses of funds and program require-
14 ments under subsection (c);

15 (ii) a description of the higher education schol-
16 arship program, including criteria for selection, du-
17 ration of scholarship, number of scholarships to be
18 awarded each year, and funding levels for scholar-
19 ships; and

20 (iii) evidence of private sector participation and
21 financial support to establish an internship, men-
22 toring, and scholarship program.

23 (B) The Director shall issue and publish such guide-
24 lines not later than 6 months after the date of the enact-
25 ment of this Act.

1 (g) PRIORITY.—The Director shall give special pri-
2 ority in awarding grants under this section to eligible local
3 educational agencies that—

4 (1) demonstrate the greatest ability to obtain
5 commitments from representatives of the private sec-
6 tor to provide services and funds described under
7 subsection (e); and

8 (2) demonstrate the greatest economic need.

9 (h) ASSESSMENT.—The Director shall assess the ef-
10 fectiveness of activities carried out under this section.

11 (i) STUDY AND REPORT.—The Director—

12 (1) shall initiate an evaluative study of the ef-
13 fectiveness of the activities carried out under this
14 section in improving student performance in mathe-
15 matics, science, and information technology at the
16 precollege level and in stimulating student interest
17 in pursuing undergraduate studies in those fields;
18 and

19 (2) shall report the findings of the study to
20 Congress not later than 4 years after the award of
21 the first scholarship.

22 Such report shall include the number of students grad-
23 uating from an institution of higher education with a
24 major in mathematics, science, or information technology

1 and the number of students who find employment in such
2 fields.

3 (j) DEFINITIONS.—In this section:

4 (1) The term “conditional agreement” means
5 an arrangement between representatives of the pri-
6 vate sector and local educational agencies to provide
7 certain services and funds, such as, but not limited
8 to, the donation of computer hardware and software,
9 the establishment of internship and mentoring op-
10 portunities for students who participate in mathe-
11 matics, science, and information technology pro-
12 grams, and the donation of scholarship funds for use
13 at institutions of higher education by eligible stu-
14 dents who have participated in the mathematics,
15 science, and information technology programs.

16 (2) The term “eligible student” means a stu-
17 dent enrolled in the 12th grade who—

18 (A) has participated in a mathematics,
19 science, and an information technology program
20 established pursuant to this section;

21 (B) has demonstrated a commitment to
22 pursue a career in information technology,
23 mathematics, science, or engineering; and

24 (C) has attained high academic standing
25 and maintains a grade point average of not less

1 than 2.7 on a 4.0 scale for the period from the
2 beginning of the 10th grade through the time
3 of application for a scholarship.

4 (k) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to the National Science
6 Foundation to carry out this section \$5,000,000 for each
7 of fiscal years 2002 through 2004.

8 (l) MAXIMUM GRANT AWARD.—An award made to an
9 eligible local educational agency under this section may
10 not exceed \$300,000.

11 **SEC. 702. ARTICULATION PARTNERSHIPS BETWEEN COM-**
12 **MUNITY COLLEGES AND SECONDARY**
13 **SCHOOLS.**

14 (a) OUTREACH GRANTS.—In making awards for out-
15 reach grants authorized under section 3(c)(2) of the Sci-
16 entific and Advanced-Technology Act of 1992 (42 U.S.C.
17 1862i(c)(2)), the Director shall give priority to proposals
18 that involve secondary schools with a majority of students
19 from groups that are underrepresented in the science,
20 mathematics, and engineering workforce. Awards in such
21 cases shall not be subject to the requirement under section
22 3(f)(3) of such Act for a matching contribution.

23 (b) AUTHORIZATION OF APPROPRIATIONS.—There
24 are authorized to be appropriated to the National Science

1 Foundation to carry out this section \$5,000,000 for each
2 of fiscal years 2002 through 2004.

3 **SEC. 703. ASSESSMENT OF IN-SERVICE TEACHER PROFES-**
4 **SIONAL DEVELOPMENT PROGRAMS.**

5 (a) ASSESSMENT.—The Director shall review all pro-
6 grams sponsored by the National Science Foundation that
7 support in-service teacher professional development for
8 science teachers to determine—

9 (1) the level of resources and degree of empha-
10 sis placed on training teachers in the effective use of
11 information technology in the classroom; and

12 (2) the allocation of resources between summer
13 activities and follow-on reinforcement training and
14 support to participating teachers during the school
15 year.

16 (b) REPORT.—The Director shall submit to Congress,
17 not later than 1 year after the date of the enactment of
18 this Act, a report that—

19 (1) describes the results of the review and as-
20 sessment conducted under subsection (a);

21 (2) summarizes the major categories of in-serv-
22 ice teacher professional development activities sup-
23 ported at the time of the review, and the funding
24 levels for such activities; and

1 (3) describes any proposed changes, including
2 new funding allocations, to strengthen the in-service
3 teacher professional development programs of the
4 National Science Foundation that support activities
5 described in paragraphs (1) and (2) of subsection
6 (a).

7 **SEC. 704. STUDY OF BROADBAND NETWORK ACCESS FOR**
8 **SCHOOLS AND LIBRARIES.**

9 (a) **REPORT TO CONGRESS.**—The Director shall con-
10 duct a study of the issues described in subsection (c), and
11 not later than 1 year after the date of the enactment of
12 this Act, transmit to Congress a report including rec-
13 ommendations to address those issues. Such report shall
14 be updated annually for 6 additional years.

15 (b) **CONSULTATION.**—In preparing the reports under
16 subsection (a), the Director shall consult with the National
17 Aeronautics and Space Administration, the National Insti-
18 tute of Standards and Technology, and such other Federal
19 agencies and educational entities as the Director considers
20 appropriate.

21 (c) **ISSUES TO BE ADDRESSED.**—The reports shall—

22 (1) identify the current status of high-speed,
23 large bandwidth capacity access to all public elemen-
24 tary and secondary schools and libraries in the
25 United States;

1 (2) identify how the provision of high-speed,
2 large bandwidth capacity access to the Internet to
3 such schools and libraries can be effectively utilized
4 within each school and library;

5 (3) consider the effect that specific or regional
6 circumstances may have on the ability of such insti-
7 tutions to acquire high-speed, large bandwidth ca-
8 pacity access to achieve universal connectivity as an
9 effective tool in the education process; and

10 (4) include options and recommendations to ad-
11 dress the challenges and issues identified in the re-
12 ports.

Passed the House of Representatives July 30, 2001.

Attest:

JEFF TRANDAHL,

Clerk.