

107TH CONGRESS
1ST SESSION

S. 461

To support educational partnerships, focusing on mathematics, science, and technology, between institutions of higher education and elementary schools and secondary schools, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 6, 2001

Mr. FRIST introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

A BILL

To support educational partnerships, focusing on mathematics, science, and technology, between institutions of higher education and elementary schools and secondary schools, 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 “Mathematics and
5 Science Education Partnership and Teacher Recruitment
6 Act of 2001”.

1 **SEC. 2. PURPOSE.**

2 The purpose of this Act is to encourage States, insti-
3 tutions of higher education, elementary schools, and sec-
4 ondary schools to participate in programs that—

5 (1) upgrade the status and stature of math and
6 science teaching as a profession by encouraging in-
7 stitutions of higher education to assume greater re-
8 sponsibility for improving math and science teacher
9 education through the establishment of a com-
10 prehensive, integrated system of recruiting and ad-
11 vising such teachers;

12 (2) focus on education of math and science
13 teachers as a career-long process that should con-
14 tinuously stimulate teachers' intellectual growth and
15 upgrade teachers' knowledge and skills;

16 (3) bring together elementary school and sec-
17 ondary school math and science teachers with sci-
18 entists, mathematicians, and engineers to increase
19 teacher content knowledge and improve teaching
20 skills through the use of more sophisticated labora-
21 tory space and equipment, computing facilities, li-
22 braries, and other resources that colleges and uni-
23 versities are more able to provide; and

24 (4) develop more rigorous mathematics and
25 science curricula that are aligned and intended to

1 prepare students for postsecondary study in mathe-
 2 matics and science.

3 **SEC. 3. DEFINITIONS.**

4 (a) INCORPORATION OF GENERAL DEFINITIONS.—

5 The provisions of section 14101 of the Elementary and
 6 Secondary Education Act of 1965 (20 U.S.C. 8801) shall
 7 apply for purposes of this Act in the same manner as they
 8 apply for purposes of the Elementary and Secondary Edu-
 9 cation Act of 1965.

10 (b) OTHER DEFINITIONS.—In this Act:

11 (1) ELIGIBLE PARTNERSHIP.—The term “eligi-
 12 ble partnership” means a partnership that—

13 (A) shall include—

14 (i) a State educational agency;

15 (ii) a mathematics or science depart-
 16 ment of an institution of higher education;
 17 and

18 (iii) a local educational agency; and

19 (B) may include—

20 (i) another institution of higher edu-
 21 cation or the teacher training department
 22 of such institution;

23 (ii) another local educational agency,
 24 or an elementary school or secondary
 25 school;

- 1 (iii) a business; or
- 2 (iv) a nonprofit organization of dem-
- 3 onstrated effectiveness, including a mu-
- 4 seum.

5 (2) HIGH NEED LOCAL EDUCATIONAL AGEN-
 6 CY.—The term “high need local educational agency”
 7 has the meaning given the term in section 201(b) of
 8 the Higher Education Act of 1965 (20 U.S.C.
 9 1021(b)).

10 (3) SUMMER WORKSHOP OR INSTITUTE.—The
 11 term “summer workshop or institute” means a
 12 workshop or institute conducted outside of the aca-
 13 demic year that—

14 (A) is conducted during a period of a min-
 15 imum of 2 weeks;

16 (B) provides for direct interaction between
 17 students and faculty; and

18 (C) provides for followup training in the
 19 classroom during the academic year for a period
 20 of a minimum of 3 days, which shall not be re-
 21 quired to be consecutive, except that—

22 (i) if the program at the summer
 23 workshop or institute is for a period of
 24 only 2 weeks, the followup training shall be
 25 for a period of more than 3 days; and

1 (ii) for teachers in rural school dis-
2 tricts, followup training through the Inter-
3 net may be used.

4 **SEC. 4. GRANTS AUTHORIZED.**

5 (a) IN GENERAL.—The Secretary is authorized to
6 award grants, on a competitive basis, to eligible partner-
7 ships to enable the eligible partnerships to pay the Federal
8 share of the costs of carrying out the authorized activities
9 described in section 6.

10 (b) DURATION.—The Secretary shall award grants
11 under this section for periods of 5 years.

12 (c) FEDERAL SHARE.—

13 (1) IN GENERAL.—The Federal share of the
14 costs of the activities assisted under this Act shall
15 be—

16 (A) 75 percent of the costs for the first
17 year an eligible partnership receives a grant
18 payment under this Act;

19 (B) 65 percent of the costs for the second
20 such year; and

21 (C) 50 percent of the costs for each of the
22 third, fourth, and fifth such years.

23 (2) NON-FEDERAL SHARE.—The non-Federal
24 share of the costs of activities assisted under this

1 Act may be provided in cash or in kind, fairly evalu-
2 ated.

3 **SEC. 5. APPLICATION.**

4 (a) IN GENERAL.—Each eligible partnership desiring
5 a grant under this Act shall submit an application to the
6 Secretary at such time, in such manner, and accompanied
7 by such information as the Secretary may require.

8 (b) CONTENTS.—Each such application shall
9 include—

10 (1) an assessment of the teacher quality and
11 professional development needs of all the entities
12 participating in the eligible partnership with respect
13 to the teaching and learning of mathematics and
14 science, including a statement as to whether the eli-
15 gible partnership includes a high need local edu-
16 cational agency;

17 (2) a description of how the activities to be car-
18 ried out by the eligible partnership will be aligned
19 with State and local standards and with other edu-
20 cational reform activities that promote student
21 achievement in mathematics and science;

22 (3) a description of how the activities to be car-
23 ried out by the eligible partnership will be based on
24 a review of relevant research, and an explanation of
25 why the activities are expected to improve student

1 performance and to strengthen the quality of mathe-
 2 matics and science instruction; and

3 (4) a description of—

4 (A) how the eligible partnership will carry
 5 out the authorized activities described in section
 6 6; and

7 (B) the eligible partnership's evaluation
 8 and accountability plan described in section 7.

9 (c) PRIORITY.—The Secretary shall give priority to
 10 any application submitted by an eligible partnership that
 11 includes a high need local educational agency.

12 **SEC. 6. AUTHORIZED ACTIVITIES.**

13 An eligible partnership shall use the grant funds pro-
 14 vided under this Act for 1 or more of the following activi-
 15 ties related to elementary schools or secondary schools:

16 (1) Developing or redesigning more rigorous
 17 mathematics and science curricula that are aligned
 18 and intended to foster college placement and prepa-
 19 ration for postsecondary study in mathematics and
 20 science.

21 (2) Creating opportunities for enhanced and on-
 22 going professional development that improves the
 23 academic content knowledge of mathematics and
 24 science teachers.

1 (3) Recruiting mathematics and science majors
2 to the teaching profession through the use of—

3 (A) signing bonuses and performance bo-
4 nuses for mathematics and science teachers;

5 (B) stipends for mathematics teachers and
6 science teachers for certification through alter-
7 native routes;

8 (C) scholarships for teachers to pursue ad-
9 vanced course work in mathematics and science;

10 (D) scholarships for students with aca-
11 demic majors in mathematics and science; and

12 (E) carrying out any other program that
13 the State believes to be effective in recruiting
14 individuals with strong mathematics or science
15 backgrounds into the teaching profession.

16 (4) Promoting strong teaching skills for mathe-
17 matics and science teachers and teacher educators,
18 including integrating reliable research-based teach-
19 ing methods into the curriculum.

20 (5) Establishing mathematics and science sum-
21 mer workshops or institutes and followup training
22 for teachers, using curricula that are experiment-ori-
23 ented, content-based, and grounded in current re-
24 search.

1 (6) Establishing web-based instructional mate-
 2 rials for mathematics and science teachers using
 3 curricula that are, experiment-oriented, content-
 4 based, and grounded in current research.

5 (7) Designing programs to prepare a teacher to
 6 provide professional development instruction to other
 7 teachers within the participating teacher's school.

8 (8) Designing programs to bring teachers into
 9 contact with working scientists, mathematicians, and
 10 engineers to increase teachers' content knowledge
 11 and enhance teachers' instructional techniques.

12 (9) Designing programs focusing on changing
 13 behaviors and practices of teachers to assist novice
 14 teachers in developing confidence in their skills to
 15 increase the likelihood that such novice teachers will
 16 continue in the teaching profession, and to generally
 17 improve the quality of teaching.

18 **SEC. 7. EVALUATION AND ACCOUNTABILITY PLAN.**

19 Each eligible partnership receiving a grant under this
 20 Act shall develop an evaluation and accountability plan for
 21 activities assisted under this Act that includes strong per-
 22 formance objectives. The plan shall include objectives and
 23 measures for—

24 (1) improved student performance on State
 25 mathematics and science assessments or on the

1 Third International Math and Science Study assess-
2 ment;

3 (2) increased participation by students in ad-
4 vanced courses in mathematics and science;

5 (3) increased percentages of secondary school
6 classes in mathematics and science taught by teach-
7 ers with academic majors in mathematics and
8 science, respectively;

9 (4) increased numbers of mathematics and
10 science teachers who participate in content-based
11 professional development activities; and

12 (5) increased passing rates of students in ad-
13 vanced courses in mathematics and science.

14 **SEC. 8. REPORT; REVOCATION OF GRANT.**

15 (a) REPORT.—Each eligible partnership receiving a
16 grant under this Act shall report annually to the Secretary
17 regarding the eligible partnership’s progress in meeting
18 the performance objectives described in section 7.

19 (b) REVOCATION.—If the Secretary determines that
20 an eligible partnership is not making substantial progress
21 in meeting the performance objectives described in section
22 7 by the end of the third year of a grant under this Act,
23 then the grant payments shall not be made for the fourth
24 and fifth year of the grant.

1 **SEC. 9. CONSULTATION WITH NATIONAL SCIENCE FOUNDA-**
2 **TION.**

3 In carrying out the activities authorized by this Act,
4 the Secretary shall consult and coordinate with the Direc-
5 tor of the National Science Foundation, particularly with
6 respect to the appropriate roles for the Department and
7 the Foundation in the conduct of summer workshops or
8 institutes provided by the mathematics and science part-
9 nerships to improve mathematics and science teaching in
10 the elementary schools and secondary schools.

11 **SEC. 10. AUTHORIZATION OF APPROPRIATIONS.**

12 There are authorized to be appropriated to carry out
13 this Act, \$500,000,000 for fiscal year 2002 and such sums
14 as may be necessary for each of the 6 succeeding fiscal
15 years.

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