I

107TH CONGRESS
1ST SESSION

H. R. 117

To improve the quality and scope of science and mathematics education.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 3, 2001

Mr. HOLT introduced the following bill; which was referred to the Committee on Education and the Workforce, and in addition to the Committee on Ways and Means, 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 improve the quality and scope of science and mathematics education.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''National Improvement in Mathematics and Science Teaching Act of 2001''.

SEC. 2. FINDINGS.

Congress finds the following:

(1) The impact of mathematics, science, and technology on our lives is greater than ever before.

We have seen an explosion in the use of computer technologies; scientists are manipulating basic biological processes, and our economy is swelling with the birth of thousands of new dot-com companies.

(2) In the next 5 years, high-tech employment will grow more than twice as fast as employment as a whole. Yet, many companies are unable to find skilled American workers. It is estimated that the shortage of high-tech professionals currently costs the United States economy $105,000,000,000 a year.

(3) As a nation, the students of the United States are not performing as well as we would like. According to tests by the National Assessment of Educational Progress, nearly 36 percent of 4th graders, 38 percent of 8th graders, and 31 percent of 12th graders perform below the basic level in mathematics. Moreover, approximately 30 percent of 4th graders and nearly 40 percent of 8th and 12th graders failed to reach the basic level in science.

(4) Students in many other countries significantly outperform United States students in science and mathematics. In fact, our high school students performed among the lowest of the 21 countries participating in the Third International Mathematics

and Science Study (TIMSS). In mathematics, our students were outperformed by 14 of the countries in the study and outperformed only 2 countries. In science, our students tested lower than 11 of the countries and once again outperformed only 2 of the countries in the study.

(5) The Federal Coordinating Council for Science, Engineering, and Technology estimated that the Federal Government spent $2,200,000,000 in 1993 on education programs specifically targeted for science, mathematics, engineering, and technology while total Federal education spending was $24,000,000,000—only 9 percent of the total Federal spending on education.

(6) According to statistics by the National Center for Education Statistics, 11 percent of teachers have no license to teach, 16 percent have emergency licenses, and 10 percent have probationary licenses. Nearly 21 percent of high school teachers teach out of field (have neither a major nor minor in their main teaching subject). For mathematics, nearly 28 percent of high school mathematics teachers do not have a major or minor in mathematics. For science, 18 percent of the teachers do not have a major or minor in science.

(7) A significant achievement gap exists with minorities. Indeed, the gap that separates minority students from white students is larger today than it was in 1990. By the conclusion of 8th grade nearly half of African American and Latino students score below the basic level in mathematics.

(8) Science and mathematics education can provide humanity with the knowledge to develop effective solutions to its global and local problems.

SEC. 3. IMPROVEMENT OF SCIENCE AND MATHEMATICS EDUCATION.

The Elementary and Secondary Education Act of 1965 (20 U.S.C. 6301 et seq.) is amended by adding at the end the following:

"TITLE XV—IMPROVEMENT OF SCIENCE AND MATHEMATICS EDUCATION

"PART A—RECRUITMENT OF QUALITY TEACHERS IN SCIENCE AND MATHEMATICS EDUCATION

"SEC. 15101. STATEMENT OF PURPOSE.

''The purpose of this part is to assist States in recruiting quality mathematics and science public education teachers.

"SEC. 15102. STATE ASSISTANCE GRANT PROGRAM.

"(a) IN GENERAL.—The Secretary shall award grants, subject to the availability of appropriations, to States to improve the quality of our science and mathematics teachers in public schools and to recruit new, qualified public school teachers into those fields.

"(b) ELIGIBILITY.—In order to receive funding, under this part, a State shall submit an application in accordance with section 15103.

"SEC. 15103. APPLICATION.

"The State shall submit the application to the Secretary at such time, in such manner, and containing such information as the Secretary may reasonably require. Each application under this section shall include, at a minimum, the following:

"(1) A description of how the State will comply with the requirements of this part.

"(2) A description of the plan to be used by the State to improve the quality of science, technology, and mathematics teachers and to recruit new, qualified teachers in science, technology, and mathematics education.

"(3) A description of how the State will partner with industry or with institutions of higher education to achieve the goals of its plan to improve the quality of science, technology, and mathematics

teachers and to recruit new, qualified teachers in mathematics, science, and technology, education.

"SEC. 15104. APPLICATION SUBMISSION.

"A State application submitted to the Secretary under this section shall be approved by the Secretary unless the Secretary makes a written determination, within 90 days after receiving the application, that the application violates provisions of this part.

"SEC. 15105. ALLOCATION.

From the funds made available under section 15108, the Secretary shall allot to each State an amount which bears the same ratio to the amount of such made available as the school-age population of the State bears to the school-age population of all States.

"SEC. 15106. MATCHING FUND BY STATE.

"In order to receive funding under this part, a State shall provide assurances that it will provide non-Federal funds of not less than 50 percent of the cost of providing a program under this part.

"SEC. 15107. AUTHORIZED USES OF FUNDS.

"Grant funds made available under this part may be used by the State for—

"(1) establishing a loan forgiveness program for teachers who major in mathematics or science and

commit to teach the subject for at least 5 consecutive years in a public school within the State;

''(2) establishing a program to provide a salary increase for mathematics and science teachers who pass an advanced competency test as determined by the State;

''(3) providing signing bonuses or other financial incentives, for mathematics and science teachers who are fully qualified to teach in these academic subject areas in locations in which there is a shortage of such fully qualified teachers within a school or the local educational agency;

''(4) establishing a high standards program to recruit professionals from mathematics, science, or technology fields and provide such professionals with alternative routes to teacher certification;

''(5) establishing a program to provide increased opportunities for minorities, individuals with disabilities, and other individuals underrepresented in the mathematics and science teaching profession; and

''(6) programs and activities that are designed to improve the quality of teaching in mathematics and science, such as—

''(A) testing of elementary and secondary school mathematics and science teachers in the subject areas taught by such teachers;

''(B) creating a career ladder, with appropriate financial incentives, and intellectual advancement for mathematics and science teachers; and

''(C) strengthening the clinical experience for students preparing to be mathematics and science teachers.

''SEC. 15108. AUTHORIZATION OF APPROPRIATIONS.

''There are authorized to be appropriated $1,000,000,000 for fiscal year 2002 and such sums as may be necessary for each of the 4 succeeding fiscal years to carry out the provisions of this part.

''PART B—PROFESSIONAL DEVELOPMENT OF MATHEMATICS AND SCIENCE TEACHERS

''SEC. 15201. STATEMENT OF PURPOSE.

''The purpose of this part is to assist the States in improving the professional development opportunities for mathematics and science teachers in public schools.

''SEC. 15202. PROFESSIONAL DEVELOPMENT GRANT PROGRAM.

''(a) IN GENERAL.—The Secretary shall award grants, subject to the availability of appropriations, to

States to improve the quality of our mathematics and science teachers in public schools by expanding and developing professional development opportunities in mathematics and science.

''(b) ELIGIBILITY.—In order to receive funding under this part, a State shall submit an application in accordance with section 15203.

''SEC. 15203. APPLICATION.

''The State shall submit the application to the Secretary at such time, in such manner, and containing such information as the Secretary may reasonably require. Each application under this section shall include, at a minimum, the following:

''(1) A description of how the State will comply with the requirements of this part.

''(2) A description of the plan to be used by the State to improve the quality of mathematics and science teaching.

''(3) A description of how the State will partner with industry or with institutions of higher education to achieve the goals of its plan to improve the quality of science, technology, and mathematics teaching and to recruit new, qualified teachers in mathematics, science, and technology education.

"SEC. 15204. APPLICATION SUBMISSION.

"A State application submitted to the Secretary under this section shall be approved by the Secretary unless the Secretary makes a written determination, within 90 days after receiving the application, that the application violates provisions of this part.

"SEC. 15205. ALLOCATION.

From the funds made available under section 15208, the Secretary shall allot to each State an amount which bears the same ratio to the amount of such made available as the school-age population of the State bears to the school-age population of all States.

"SEC. 15206. MATCHING FUND BY STATE.

"In order to receive funding under this part, a State shall provide assurances that it will provide non-Federal funds of not less than 50 percent of the cost of providing a program under this part.

"SEC. 15207. AUTHORIZED USES OF FUNDS.

"Grant funds made available under this part may be used by the State for—

"(1) establishing innovative professional development programs (which may be through partnerships, including partnerships with institutions of higher education), including programs that train mathematics and science teachers to use technology to improve teaching and learning;

''(2) developing and using proven, cost-effective strategies for the implementation of professional development activities for mathematics and science teachers, such as through the use of technology and distance learning;

''(3) professional development programs that provide instruction for mathematics and science teachers in teaching children with different learning styles, particularly children with disabilities and children with special learning needs (including those who are gifted and talented);

''(4) establishing partnerships with industry to create summer fellowships for mathematics and science teachers to work in these fields during the summer months;

''(5) establishing partnerships with institutions of higher learning to develop summer programs for mathematics and science teachers to expand and improve upon their knowledge of these subjects; and

''(6) establishing master teacher initiatives in mathematics and science education.

''SEC. 15208. AUTHORIZATION OF APPROPRIATIONS.

''There are authorized to be appropriated $1,000,000,000 for fiscal year 2002 and such sums as

may be necessary for each of the 4 succeeding fiscal years to carry out the provisions of this part.

"PART C—JOHN GLENN ACADEMIES

"SEC. 15301. STATEMENT OF PURPOSE.

"The purpose of this part is to establish 15 John Glenn Academies, 1 in each of the 10 Federal regions designated by the Department of Education, with 5 more strategically located, as determined by the Secretary, to facilitate summer workshops for mathematics and science education teachers and to provide intensive, year-long fellowships for 3,000 individuals to prepare them to meet State certification requirements for teaching mathematics or science in grades 7 through 12.

"SEC. 15302. PROGRAM AUTHORIZED.

"The Secretary, in cooperation with the Director of the National Science Foundation, shall provide assistance for the creation and support of regional centers for the improvement of teaching in mathematics and science education (hereinafter in this title referred to as 'John Glenn Academies').

"SEC. 15303. ESTABLISHMENT AND SELECTION.

"(a) PROGRAM ADMINISTRATION.—

"(1) PROPOSED RULES.—The Secretary, after consultation with the Director of the National Science Foundation, shall publish in the Federal

Register, not later than 90 days after the date of the enactment of the National Improvement in Mathematics and Science Teaching Act of 2001, proposed rules for the program to establish John Glenn Academies, including—

''(A) a description of the program, including the summer workshops and John Glenn Academy Fellowships;

''(B) the procedure to be followed by applicants; and

''(C) the criteria for determining qualified applicants.

''(2) FINAL RULES.—The Secretary shall publish final rules in the Federal Register for the program under this part after the expiration of a 30-day comment period on such proposed rules.

''(b) SELECTION.—

''(1) APPLICATIONS REQUIRED.—

''(A) IN GENERAL.—Any undergraduate institution of higher education, consortia of such institutions, nonprofit organizations, or groups thereof may submit an application to receive funding to establish a John Glenn Academy under this part in accordance with the procedures established by the Secretary, in con-

sultation with the Director of the National Science Foundation.

''(B) ASSURANCES.—In order to receive funding under this part, an applicant shall provide adequate assurances that it will contribute not less than 25 percent of the proposed Academy's capital and annual operating and maintenance costs.

''(2) SELECTION.—The Secretary, in conjunction with the Director of the National Science Foundation, shall subject each application to competitive, merit review. In making a decision regarding whether to approve such application and provide funding under this part, the Secretary shall consider, at a minimum—

''(A) the merits of the application, particularly those portions of the application regarding the ability to adapt teacher training in mathematics and science education to the needs of particular regions;

''(B) the quality of service to be provided;

''(C) the makeup of the groups or institutions applying for such funding;

''(D) the geographical diversity and extent of the area to be served; and

''(E) the percentage of funding and amount of in-kind commitment from other sources.

''(3) EVALUATION.—Each John Glenn Academy which receives financial assistance under this part shall be evaluated during its third year of operation by an evaluation panel appointed by the Secretary. Each evaluation panel shall measure each Academy's performance against the objectives specified in this section. The panel shall recommend to the Secretary whether funding should be renewed based on such evaluation.

''SEC. 15304. FUNCTIONS OF ACADEMIES.

''(a) ESTABLISHMENT.—John Glenn Academies may be developed by an institution of higher education in accordance with this part, and shall be comprised of a consortium of at least 1 institution of higher education, 1 community college, neighboring school districts, business partners, members of the Eisenhower Math and Science Consortia, and may include the participation of nonprofit entities, organizations, or groups thereof.

''(b) OBJECTIVES OF ACADEMIES.—The objective of the John Glenn Academies is to enhance the teaching of mathematics and science education through—

''(1) advising elementary and secondary school administrators, school boards, and teachers regarding professional development opportunities for mathematics and science teachers;

''(2) participation of individuals from the private sector, institutions of higher education, State and local governments, and other Federal agencies;

''(3) dissemination of information about professional development programs for mathematics and science teachers;

''(4) summer workshops for mathematics and science teachers as described in subpart 1; and

''(5) intensive training of John Glenn Academy Fellows, as described in subpart 2, in effective teaching methods in mathematics or science.

''(c) ACTIVITIES OF ACADEMIES.—The activities of the John Glenn Academies shall include the following:

''(1) INFORMATION SHARING.—The transfer and dissemination of research findings and expertise of participants of John Glenn Academies to local school authorities, including school administrators, school boards, and teachers on mathematics and science education professional development.

''(2) TRAINING.—The ongoing training of mathematics and science teachers in public elementary and secondary schools.

''(3) WORKSHOPS.—Summer workshops as described in subpart 1.

''(4) ADDITIONAL TRAINING.—The training of John Glenn fellows as described in subpart 2.

''(5) SUPPORT SERVICES.—Support services to teachers, administrators, and school board members as agreed upon by John Glenn Academies representatives and local school authorities.

''(6) SKILL STANDARDS.—The advising of teachers, administrators, and school board members on current skill standards employed by private industry.

''SEC. 15305. AUTHORIZATION OF APPROPRIATIONS.

''There are authorized to be appropriated such sums as may be necessary for fiscal year 2002 and for each of the 4 succeeding fiscal years to carry out the provisions of this part.

''Subpart 1—John Glenn Academy Summer Workshops

''SEC. 15311. PROGRAM AUTHORIZED.

''From amounts made available to carry out this subpart, the Secretary is authorized to make grants to the

15 John Glenn Academies for summer workshops described in section 15312.

"SEC. 15312. ALLOWABLE ACTIVITIES.

"Each recipient of funds under section 15311 shall use the funds for the following:

"(1) The establishment and operation of mathematics and science summer workshops within the John Glenn Academies that provide professional development to elementary and secondary school teachers. Such workshops shall be content-based, based on school year curricula, and focus only secondarily on pedagogy.

"(2) To provide teachers with travel expense reimbursement, a stipend, or classroom materials related to attending such a workshop.

"(3) The establishment of a mechanism to provide supplemental assistance and followup training during the school year for summer workshop graduates.

"SEC. 15313. REQUIREMENTS FOR JOHN GLENN ACADEMY SUMMER WORKSHOPS.

"The summer workshops—

"(1) shall use curricula that are object-centered, experiment-oriented, content-based, and grounded in current research;

''(2) shall be conducted during a period of a minimum of 2 weeks;

''(3) shall provide for direct interaction between students and faculty; and

''(4) shall provide for followup training in the classroom during the academic year for a period of a minimum of 3 days, which shall not be required to be consecutive, except that—

''(A) if the summer workshop is for a period of only 2 weeks, the followup training shall be for a period of more than 3 days; and

''(B) for teachers in rural school districts, followup training through the Internet may be used.

''SEC. 15314. CREDIT FOR PARTICIPATION.

''Participation in a John Glenn Academy Summer Workshop supported under this subpart shall earn credit toward—

''(1) State continuing education requirements for teachers; or

''(2) a postbaccalaureate degree program at an institution of higher education.

''SEC. 15315. APPROPRIATIONS.

''There are authorized to be appropriated $1,214,000,000 for fiscal year 2002 and such sums as

may be necessary for the 4 succeeding fiscal years to carry out the provisions of this subpart.

"Subpart 2—The John Glenn Fellowship Program

"SEC. 15321. PROGRAM AUTHORIZED.

''From amounts made available to carry out this subpart, the Secretary is authorized to make grants to the 15 John Glenn Academies for a fellowship program designed to train 3,000 mid-career professionals in the effective teaching of mathematics or science in grades 7 through 12 of public elementary and secondary schools.

"SEC. 15322. ALLOWABLE ACTIVITIES.

''Each recipient of funds under section 15321 shall use the funds for the following:

''(1) The establishment and operation of an intensive, year-long fellowship program in mathematics or science within the John Glenn Academies that provide training and development to become mathematics or science teachers in grades 7 through 12 of public elementary and secondary schools. Such fellowships shall be content-based and be designed in a way to get the fellowship graduate certification by the State for teaching.

''(2) To provide fellowship recipients with a stipend of $30,000, living arrangements for the year, and classroom materials related to such a program.

''(3) The establishment of a mechanism to provide supplemental assistance and followup training during the school year for John Glenn Academy Fellowship graduates.

''SEC. 15323. REQUIREMENTS FOR JOHN GLENN ACADEMY FELLOWSHIPS.

''The John Glenn Fellowship program—

''(1) shall be conducted during a period of a minimum of 1 year;

''(2) shall provide for direct interaction between John Glenn Fellows and current mathematics and science teachers;

''(3) shall include school-based internships and supervised teaching; and

''(4) shall provide for followup training in the classroom during the next 2 academic years for a period of a minimum of 2 weeks.

''SEC. 15324. DISTRICT HIRING OF GLENN FELLOWS.

''A school district that hires a John Glenn fellow who has successfully completed the John Glenn Academy Fellowship program supported under this subpart shall receive $10,000 in Federal funds to assist in the hiring of such fellow for a period of 3 academic years.

"SEC. 15325. APPROPRIATIONS.

''There are authorized to be appropriated $120,000,000 for fiscal year 2002 and such sums as may be necessary for each of the 4 succeeding fiscal years to carry out the provisions of this subpart.

"PART D—NATIONAL CLEARINGHOUSE OF BEST PRACTICES

"SEC. 15401. PROGRAM AUTHORIZED.

''The Secretary shall establish and operate a National Clearinghouse of Best Practices to coordinate successful and proven professional development opportunities for teachers, collect and disseminate curricular materials, and undertake other activities to encourage teacher interest and involvement in professional development, particularly for mathematics and science teachers of grades 7 through 12.

"SEC. 15402. APPROPRIATIONS.

''There are authorized to be appropriated $5,000,000 for fiscal year 2002 and such sums as may be necessary for each of the 4 succeeding 4 years to carry out the provisions of this part.

"PART E—PROGRAM TO IMPROVE SCIENCE AND MATHEMATICS EDUCATION

"SEC. 15501. STATEMENT OF PURPOSE.

''The purpose of this part is to improve the quality and focus placed on mathematics and science education,

to help all students increase achievement in these subjects, and to encourage more students to enter into the fields of mathematics, science, and technology.

"SEC. 15502. STATE IMPROVEMENT GRANTS.

''The Secretary shall award grants, subject to the availability of appropriations, to States submitting an application in accordance with section 15505 to reform and improve the quality of mathematics and science education and to encourage more students to focus their studies on these areas of education.

"SEC. 15503. ALLOCATION.

From the funds made available under section 15510, the Secretary shall allot to each State an amount which bears the same ratio to the amount of such made available as the school-age population of the State bears to the school-age population of all States.

"SEC. 15504. MATCHING FUND BY STATE.

''In order to receive funding under this part, a State shall provide assurances that it will provide non-Federal funds of not less than 50 percent of the cost of providing a program under this part.

"SEC. 15505. APPLICATION.

''The State shall submit the application to the Secretary at such time, in such manner, and containing such information as the Secretary may reasonably require.

Each application under this section shall include, at a minimum, the following:

''(1) A description of how the State will comply with the requirements of this part.

''(2) A description of the plan to be used by the State to improve the quality and achievement of its students in mathematics and science education.

''(3) An assurance that the State will require each local educational agency and school receiving funds under this part to publicly report their annual progress on improving mathematics, science, and technology education. If the local educational agency or school is already required to file a 'report card' or assessment report, the information can be included with that information.

''(4) A description of how the State will hold local educational agencies and schools accountable for making annual gains in mathematics and science education.

''(5) A description of how the State will partner with industry and with institutions of higher education to achieve the goals of its plan to improve mathematics and science education.

"SEC. 15506. APPLICATION SUBMISSION.

"A State application submitted to the Secretary under this part shall be approved by the Secretary unless the Secretary makes a written determination, not later than 90 days after receiving the application, that the application violates the provisions of this part.

"SEC. 15507. AUTHORIZED USES OF FUNDS.

"Grant funds made available under this part may be used by the State for—

"(1) setting high standards for mathematics, science, and technology education, such as the standards established in Project 2061 by the American Association for the Advancement of Science;

"(2) establishing advanced placement classes in mathematics, science, and technology;

"(3) developing after-school activities designed to encourage interest in mathematics, science, and technology;

"(4) developing summer programs for students designed to encourage interest in and to develop and improve upon skills in mathematics, science, and technology;

"(5) developing internship programs for students with local businesses or educational institutions in the areas of mathematics, science, and technology;

''(6) establishing a State public high school of mathematics, science, and technology for gifted students from the State; and

''(7) providing scholarships or interest-free loans for students majoring in mathematics, science, or technology in institutions of higher education in the State.

''SEC. 15508. ACCOUNTABILITY.

''A State shall report yearly to the Secretary regarding the use of grant funds, the progress made in meeting their objectives as stipulated in their application for funds, and whether students' performance in mathematics, science, and technology has increased as measured by assessment techniques recognized in the field of education and accepted by the Secretary.

''SEC. 15509. ACADEMIC ACHIEVEMENT AWARDS PROGRAM.

''(a) AWARDS PROGRAM.—Each State receiving a grant under this part may establish a program to make academic achievement awards to recognize and financially reward public schools served under this part that have significantly raised the achievement of students in mathematics and science education.

''(b) ACHIEVEMENT AWARDS FUNDS.—For the purpose of carrying out this section, each State receiving a grant under this part may reserve not more than 30 per-

cent of such funding for academic achievement awards. The amount reserved must be expended not later than 3 years after receipt. If the amount reserved is not expended within 3 years, such funds shall be used for activities described in section 15507.

''SEC. 15510. APPROPRIATIONS.

''There are authorized to be appropriated $1,000,000,000 for fiscal years 2002 and such sums as may be necessary for each of the 4 succeeding fiscal years to carry out the provisions of this part.

''PART F—EQUITY IN MATHEMATICS AND SCIENCE EDUCATION

''SEC. 15601. STATEMENT OF PURPOSE.

''The purpose of this part is to narrow any achievement gap that exists between Caucasian and minority students and between boys and girls in mathematics, science, and technology education.

''Subpart 1—Achievement Equity Grants

''SEC. 15611. PROGRAM AUTHORIZED.

''(a) IN GENERAL.—The Secretary is authorized to provide grants to local educational agencies to provide subgrants to elementary and secondary schools—

''(1) to increase the achievement of minority students in mathematics and science;

''(2) to encourage the ongoing interest of minority students in mathematics, science, and technology; and

''(3) to prepare minority students to pursue undergraduate and graduate degrees and careers in mathematics, science, or technology.

''(b) ELIGIBILITY.—To be eligible to receive a grant under this subpart, a local educational agency shall submit an application to the Secretary at such time, in such form, and containing such information as the Secretary may reasonably require.

''SEC. 15612. CONTENTS OF APPLICATION.

''The application referred to in section 15611 shall contain, at a minimum, the following:

''(1) A specific program description, including the content of the program and the research and models used to design the program.

''(2) A description of the collaboration between elementary and secondary schools to fulfill goals of the program.

''(3) An explanation regarding the recruitment and selection of participants.

''(4) A description of the instructional and motivational activities planned to be used.

''(5) An evaluation plan.

"SEC. 15613. SELECTION.

''The Secretary shall subject each application to competitive, merit review. In making a decision regarding whether to approve such application and provide funding under this subpart, the Secretary shall consider at a minimum—

''(1) the merits of the application;

''(2) the quality of service to be provided;

''(3) the programs to be administered with such funding; and

''(4) the achievement scores of the students in that particular area to be serviced.

"SEC. 15614. ELEMENTARY SCHOOL PROGRAM.

''(a) IN GENERAL.—Local educational agencies shall select elementary schools to provide services that—

''(1) encourage minority students in grades 4 and higher to enjoy and pursue studies in mathematics, science, and technology;

''(2) acquaint minority students in grades 4 and higher with careers in mathematics, science, and technology; and

''(3) educate the parents of minority students in grades 4 and higher about the difficulties faced by such students to maintain an interest and desire to achieve in mathematics, science, and technology

and enlist the help of the parents in overcoming these difficulties.

''(b) USES OF FUNDS.—An elementary school that receives a subgrant under this subpart may use such funds for the following:

''(1) Tutoring in mathematics, science, and technology.

''(2) Mentoring relationships, both in-person and through the Internet.

''(3) Payment of the costs of attending events and academic programs in mathematics, science, and technology.

''(4) After-school activities designed to encourage the interest of minorities in grades 4 and higher in mathematics, science, and technology.

''(5) Summer programs designed to encourage interest in and develop skills in mathematics, science, and technology.

''(6) Purchasing software designed for minority students or designed to encourage the interest of such students in mathematics, science, and technology.

''(7) Field trips to locations that educate and encourage minority students' interest in mathematics, science, and technology or that acquaint mi-

norities with careers in mathematics, science, and technology.

''(8) Purchasing and disseminating information to parents of minority students in grades 4 and higher that will help parents to encourage their child's interest in mathematics, science, and technology.

"SEC. 15615. SECONDARY SCHOOL PROGRAM.

''(a) IN GENERAL.—Local educational agencies shall select secondary schools to provide services that—

''(1) encourage minority students in grades 9 and higher to major in mathematics, science, and technology in a postsecondary institution;

''(2) provide academic advice and assistance in high school course selection;

''(3) encourage minority students in grades 9 and higher to plan for careers in mathematics, science, and technology; and

''(4) educate the parents of minority students in grades 9 and higher about the difficulties faced by such students to maintain an interest and desire to achieve in mathematics, science, and technology and enlist the help of the parents in overcoming these difficulties.

''(b) USES OF FUNDS.—A secondary school that receives a subgrant under this subpart may use such funds for the following:

''(1) Tutoring in mathematics, science, and technology.

''(2) Mentoring relationships, both in-person and through the Internet.

''(3) Paying the costs of attending events and academic programs in mathematics, science, and technology.

''(4) Establishing internships in mathematics, science, or technology either in local industry or at an institution of higher education.

''(5) After-school activities designed to encourage the interest of minority students in grades 9 and higher in mathematics, science, and technology, including the cost of the portion of a staff salary to supervise such activities.

''(6) Summer programs designed to encourage interest in and develop skills in mathematics, science, and technology.

''(7) Purchasing software designed for minority students, or designed to encourage the interest of such students in mathematics, science, and technology.

''(8) Field trips to locations that educate and encourage the interest of minority students in mathematics, science, and technology or that acquaint such students with careers in mathematics, science, and technology.

''(9) Visits to institutions of higher education to acquaint minority students with college-level programs in mathematics, science, or technology, and to meet with educators and minority college students who will encourage minority high school students to pursue degrees in mathematics, science, or technology.

''SEC. 15616. APPROPRIATIONS.

''There are authorized to be appropriated $500,000,000 for fiscal year 2002 and such sums as may be necessary for each of the 4 succeeding fiscal years to carry out the provisions of this subpart.

''Subpart 2—Gender Equity Grants

''SEC. 15621. PROGRAM AUTHORIZED.

''(a) ESTABLISHMENT.—The Secretary shall establish a grant program, subject to the availability of appropriations, to narrow the achievement gap that currently exists between boys and girls in mathematics, science, and technology education.

''(b) PROGRAM AUTHORIZED.—The Secretary is authorized to provide grants to local educational agencies to provide subgrants to public elementary and secondary schools to encourage the ongoing interest of girls in mathematics, science, and technology and to prepare girls to pursue undergraduate and graduate degrees and careers in mathematics, science, or technology.

''(c) ELIGIBILITY.—To be eligible to receive a grant under this subpart, a local educational agency shall submit an application to the Secretary at such time, in such form, and containing such information as the Secretary may reasonably require.

''SEC. 15622. CONTENTS OF APPLICATION.

''The application referred to in section 15621 shall contain, at a minimum, the following:

''(1) A specific program description, including the content of the program and the research and models used to design the program.

''(2) A description of the collaboration between elementary and secondary schools to fulfill goals of the program.

''(3) An explanation regarding the recruitment and selection of participants.

''(4) A description of the instructional and motivational activities planned to be used.

''(5) An evaluation plan.

''SEC. 15623. SELECTION.

''The Secretary shall subject each application to competitive, merit review. In making a decision regarding whether to approve such application and provide funding under this subpart, the Secretary shall consider at a minimum—

''(1) the merits of the application;

''(2) the quality of service to be provided;

''(3) the programs to be administered with such funding; and

''(4) the achievement scores of the students in that particular service area.

''SEC. 15624. ELEMENTARY SCHOOL PROGRAM.

''(a) IN GENERAL.—Local educational agencies shall select elementary schools to provide services that—

''(1) encourage girls in grades 4 and higher to enjoy and pursue studies in mathematics, science, and technology;

''(2) acquaint girls in grades 4 and higher with careers in mathematics, science, and technology; and

''(3) educate the parents of girls in grades 4 and higher about the difficulties faced by girls to maintain an interest and desire to achieve in mathe-

matics, science, and technology and enlist the help of the parents in overcoming these difficulties.

''(b) USES OF FUNDS.—An elementary school that receives a subgrant under this subpart may use such funds for the following:

''(1) Tutoring in reading, mathematics, science, and technology.

''(2) Mentoring relationships, both in-person and through the Internet.

''(3) After-school activities designed to encourage the interest of girls in grades 4 and higher in mathematics, science, and technology.

''(4) Summer programs designed to encourage interest in and develop skills in mathematics, science, and technology.

''(5) Purchasing software designed for girls, or designed to encourage girls' interest in mathematics, science, and technology.

''(6) Field trips to locations that educate and encourage girls' interest in mathematics, science, and technology or that acquaint girls with careers in mathematics, science, and technology.

''(7) Purchasing and disseminating information to parents of girls in grades 4 and higher that will

help parents to encourage their daughters' interest in mathematics, science, and technology.

"SEC. 15625. SECONDARY SCHOOL PROGRAM.

''(a) IN GENERAL.—Local educational agencies shall select secondary schools to provide services that—

''(1) encourage girls in grades 9 and higher to major in mathematics, science, and technology in a postsecondary institution;

''(2) provide academic advice and assistance in high school course selection;

''(3) encourage girls in grades 9 and higher to plan for careers in mathematics, science, or technology; and

''(4) educate the parents of girls in grades 9 and higher about the difficulties faced by girls to maintain an interest and desire to achieve in mathematics, science, and technology and enlist the help of the parents in overcoming these difficulties.

''(b) USES OF FUNDS.—A secondary school that receives a subgrant under this subpart may use such funds for the following:

''(1) Tutoring in mathematics, science, and technology.

''(2) Mentoring relationships, both in-person and through the Internet.

''(3) Paying 50 percent of the cost of an internship in mathematics, science, or technology.

''(4) After-school activities designed to encourage the interest of girls in grades 9 and higher in mathematics, science, and technology, including the cost of that portion of a staff salary to supervise these activities.

''(5) Summer programs designed to encourage interest in and develop skills in mathematics, science, and technology.

''(6) Purchasing software designed for girls, or designed to encourage girls' interest in mathematics, science, and technology.

''(7) Field trips to locations that educate and encourage girls' interest in mathematics, science, and technology or that acquaint girls with careers in mathematics, science, and technology.

''(8) Visits to institutions of higher education to acquaint girls with college-level programs in mathematics, science, or technology, and to meet with educators and female college students who will encourage them to pursue degrees in mathematics, science, or technology.

''SEC. 15626. APPROPRIATIONS.

''There are authorized to be appropriated $500,000,000 for fiscal year 2002 and such sums as may be necessary for each of the 4 succeeding fiscal years to carry out the provisions of this subpart.''.

SEC. 4. CREDIT FOR BUSINESSES THAT EMPLOY SCIENCE, MATHEMATICS, AND TECHNOLOGY TEACHERS IN SUMMER FELLOWSHIPS THAT ARE RELATED TO THEIR FIELDS OF TEACHING.

(a) IN GENERAL.—Subpart D of part IV of subchapter A of chapter 1 of the Internal Revenue Code of 1986 (relating to business related credits) is amended by adding at the end the following new section:

''SEC. 45E. EMPLOYMENT OF SCIENCE, MATHEMATICS, AND TECHNOLOGY TEACHERS IN SUMMER FELLOWSHIPS THAT ARE RELATED TO THEIR FIELDS OF TEACHING.

''(a) IN GENERAL.—For purposes of section 38, the summer fellowship credit determined under this section for the taxable year is an amount equal to the qualified summer fellowship expenses of the taxpayer for such taxable year.

''(b) MAXIMUM CREDIT.—The credit determined under this section for any taxable with respect to qualified summer fellowship expenses attributable to an eligible teacher shall not exceed $10,000.

''(c) QUALIFIED SUMMER FELLOWSHIP EXPENSES.—For purposes of this section—

''(1) IN GENERAL.—The term 'qualified summer fellowship expenses' means any amount paid or incurred to carry out a qualified summer fellowship program of the taxpayer but only to the extent that such amount is attributable to the participation in such program of any eligible teacher, including amounts paid to such a teacher as a stipend while participating in such program.

''(2) QUALIFIED SUMMER FELLOWSHIP PROGRAM.—The term 'qualified summer fellowship program' means any program—

''(A) which is established jointly by—

''(i) a taxpayer engaged in a trade or business within an area of science, mathematics, or technology, and

''(ii) an institution of higher education or a John Glenn Academy (within the meaning of part C of title 15 of the Elementary and Secondary Education Act of 1965),

''(B) under which eligible teachers receive for at least 6 weeks—

"(i) training to enhance their teaching skills in the areas of science, mathematics, or technology, or

"(ii) otherwise improve their knowledge in such areas, and

"(C) which incorporates ways to apply the fellowship experience to the classroom.

"(3) ELIGIBLE TEACHER.—The term 'eligible teacher' means any individual—

"(A) who is a teacher in grades K–12 at a public educational organization described in section 170(b)(1)(A)(ii) which is located in the United States, and

"(B) whose teaching responsibilities at such school include, or are likely to include, any course in the areas of science, mathematics, or technology.

"(d) DENIAL OF DOUBLE BENEFIT.—No deduction shall be allowed under this chapter for any amount allowed as a credit under this section.".

(b) CONFORMING AMENDMENTS.—

(1) Section 38(b) of such Code is amended—

(A) by striking "plus" at the end of paragraph (12),

(B) by striking the period at the end of paragraph (13), and inserting ", plus", and

(C) by adding at the end the following new paragraph:

"(14) the summer fellowship credit determined under section 45E.".

(2) Subsection (d) of section 39 of such Code (relating to carryback and carryforward of unused credits) is amended by adding at the end the following new paragraph:

"(10) NO CARRYBACK OF SECTION 45E CREDIT BEFORE ENACTMENT OF CREDIT.—No portion of the unused business credit for any taxable year which is attributable to the credit determined under section 45E may be carried back to a taxable year beginning before the date of the enactment of this paragraph.".

(3) The table of sections for subpart D of part IV of subchapter A of chapter 1 of such Code is amended by adding at the end the following new item:

"Sec. 45E. Employment of science, mathematics, and technology teachers in summer fellowships that are related to their fields of teaching.".

(c) EFFECTIVE DATE.—The amendments made by this section shall apply to taxable years beginning after the date of the enactment of this Act.

SEC. 5. FAIR MARKET VALUE DEDUCTION FOR CHARITABLE CONTRIBUTIONS OF SCIENCE, MATHEMATICS, OR TECHNOLOGY EQUIPMENT TO PUBLIC ELEMENTARY AND SECONDARY SCHOOLS.

(a) IN GENERAL.—Subsection (e) of section 170 of the Internal Revenue Code of 1986 (relating to certain contributions of ordinary income and capital gain property) is amended by adding at the end the following new paragraph:

''(7) SPECIAL RULE FOR CONTRIBUTIONS OF SCIENCE, MATHEMATICS, OR TECHNOLOGY EQUIPMENT FOR PUBLIC ELEMENTARY OR SECONDARY SCHOOL PURPOSES.—

''(A) IN GENERAL.—Paragraph (1) shall not apply to a qualified public elementary or secondary educational contribution.

''(B) QUALIFIED PUBLIC ELEMENTARY OR SECONDARY EDUCATIONAL CONTRIBUTION.—For purposes of this paragraph, the term 'qualified public elementary or secondary educational contribution' means a charitable contribution by a corporation of any science, mathematics or technology equipment, but only if—

"(i) the contribution is to a public educational organization described in subsection (b)(1)(A)(ii),

"(ii) the contribution is made not later than 2 years after the date the taxpayer acquired the property (or in the case of property constructed by the taxpayer, the date the construction of the property is substantially completed),

"(iii) the original use of the property is by the donee,

"(iv) substantially all of the use of the property by the donee is for use within the United States for educational purposes in any of the grades K–12 that are related to the purpose or function of the donee,

"(v) the property is not transferred by the donee in exchange for money, other property, or services, except for shipping, installation and transfer costs,

"(vi) the property will fit productively into the donee's education plan, and

"(vii) the donee's use and disposition of the property will be in accordance with the provisions of clauses (iv) and (v).

"(C) SPECIAL RULE RELATING TO CONSTRUCTION OF PROPERTY.—For the purposes of this paragraph, the rules of paragraph (4)(C) shall apply.

"(D) DEFINITIONS.—For the purposes of this paragraph—

"(i) SCIENCE, MATHEMATICS OR TECHNOLOGY EQUIPMENT.—The term 'science, mathematics or technology equipment' means—

"(I) any equipment to be used in the teaching of science, mathematics, or technology course, and

"(II) any other technology equipment.

"(ii) CORPORATION.—The term 'corporation' has the meaning given to such term by paragraph (4)(D)."

(b) EFFECTIVE DATE.—The amendment made by this section shall apply to contributions made after the date of the enactment of this Act.

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