

***In the Senate of the United States,***

*July 19, 2007.*

*Resolved,* That the bill from the House of Representatives (H.R. 2272) entitled “An Act to invest in innovation through research and development, and to improve the competitiveness of the United States.”, do pass with the following

**AMENDMENT:**

Strike out all after the enacting clause and insert:

1 ***SECTION 1. SHORT TITLE.***

2       *This Act may be cited as the “America COMPETES*  
3 *Act” or the “America Creating Opportunities to Meaning-*  
4 *fully Promote Excellence in Technology, Education, and*  
5 *Science Act”.*

1 **SEC. 2. ORGANIZATION OF ACT INTO DIVISIONS; TABLE OF**  
 2 **CONTENTS.**

3 (a) *DIVISIONS.*—*This Act is organized into 5 divisions*  
 4 *as follows:*

5 (1) *DIVISION A.—Commerce and Science.*

6 (2) *DIVISION B.—Department of Energy.*

7 (3) *DIVISION C.—Education.*

8 (4) *DIVISION D.—National Science Foundation.*

9 (5) *DIVISION E.—General Provisions.*

10 (b) *TABLE OF CONTENTS.*—*The table of contents for*  
 11 *this Act is as follows:*

*Sec. 1. Short title.*

*Sec. 2. Organization of Act into divisions; table of contents.*

*DIVISION A—COMMERCE AND SCIENCE*

*Sec. 1001. Short title.*

*TITLE I—OFFICE OF SCIENCE AND TECHNOLOGY POLICY;  
 GOVERNMENT-WIDE SCIENCE*

*Sec. 1101. National Science and Technology Summit.*

*Sec. 1102. Study on barriers to innovation.*

*Sec. 1103. National Innovation Medal.*

*Sec. 1104. Release of scientific research results.*

*Sec. 1105. Semiannual Science, Technology, Engineering, and Mathematics Days.*

*Sec. 1106. Study of service science.*

*TITLE II—INNOVATION PROMOTION*

*Sec. 1201. President’s Council on Innovation and Competitiveness.*

*Sec. 1202. Innovation acceleration research.*

*TITLE III—NATIONAL AERONAUTICS AND SPACE ADMINISTRATION*

*Sec. 1301. NASA’s contribution to innovation.*

*Sec. 1302. Aeronautics Institute for Research.*

*Sec. 1303. Basic research enhancement.*

*Sec. 1304. Aging workforce issues program.*

*Sec. 1305. Conforming amendments.*

*Sec. 1306. Fiscal year 2008 basic science and research funding.*

*TITLE IV—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY*

*Sec. 1401. Authorization of appropriations.*

- Sec. 1402. Amendments to the Stevenson-Wydler Technology Innovation Act of 1980.*
- Sec. 1403. Innovation acceleration.*
- Sec. 1404. Manufacturing extension.*
- Sec. 1405. Experimental Program to Stimulate Competitive Technology.*
- Sec. 1406. Technical amendments to the National Institute of Standards and Technology Act and other technical amendments.*
- Sec. 1407. Clarification of eligible contributions in connection with regional Centers responsible for implementing the objectives of the hollings manufacturing partnership program.*

#### TITLE V—OCEAN AND ATMOSPHERIC PROGRAMS

- Sec. 1501. Ocean and atmospheric research and development program.*
- Sec. 1502. NOAA ocean and atmospheric science education programs.*
- Sec. 1503. NOAA's contribution to innovation.*
- Sec. 1504. NOAA accountability and transparency.*

#### DIVISION B—DEPARTMENT OF ENERGY

- Sec. 2001. Short title.*
- Sec. 2002. Definitions.*
- Sec. 2003. Mathematics, science, and engineering education at the Department of Energy.*
- Sec. 2004. Department of Energy early-career research grants.*
- Sec. 2005. Advanced Research Projects Authority-Energy.*
- Sec. 2006. Authorization of appropriations for the Department of Energy for basic research.*
- Sec. 2007. Discovery science and engineering innovation institutes.*
- Sec. 2008. Protecting America's Competitive Edge (PACE) graduate fellowship program.*
- Sec. 2009. Title IX compliance.*
- Sec. 2010. High-risk, high-reward research.*
- Sec. 2011. Distinguished scientist program.*

#### DIVISION C—EDUCATION

- Sec. 3001. Findings.*
- Sec. 3002. Definitions.*

#### TITLE I—TEACHER ASSISTANCE

##### Subtitle A—Teachers for a Competitive Tomorrow

- Sec. 3111. Purpose.*
- Sec. 3112. Definitions.*
- Sec. 3113. Programs for baccalaureate degrees in mathematics, science, engineering, or critical foreign languages, with concurrent teacher certification.*
- Sec. 3114. Programs for master's degrees in mathematics, science, technology, or critical foreign languages education.*
- Sec. 3115. General provisions.*
- Sec. 3116. Authorization of appropriations.*

##### Subtitle B—Advanced Placement and International Baccalaureate Programs

- Sec. 3121. Purpose.*
- Sec. 3122. Definitions.*

*Sec. 3123. Advanced Placement and International Baccalaureate programs.*

*Subtitle C—Promising Practices in Mathematics, Science, Technology, and Engineering Teaching*

*Sec. 3131. Promising practices.*

**TITLE II—MATHEMATICS**

*Sec. 3201. Math Now for elementary school and middle school students program.*

*Sec. 3202. Summer term education programs.*

*Sec. 3203. Math skills for secondary school students.*

**TITLE III—FOREIGN LANGUAGE PARTNERSHIP PROGRAM**

*Sec. 3301. Findings and purpose.*

*Sec. 3302. Definitions.*

*Sec. 3303. Program authorized.*

*Sec. 3304. Authorization of appropriations.*

**TITLE IV—ALIGNMENT OF EDUCATION PROGRAMS**

*Sec. 3401. Alignment of secondary school graduation requirements with the demands of 21st century postsecondary endeavors and support for P-16 education data systems.*

**TITLE V—MATHEMATICS AND SCIENCE PARTNERSHIP BONUS GRANTS**

*Sec. 3501. Mathematics and science partnership bonus grants.*

*Sec. 3502. Authorization of appropriations.*

**DIVISION D—NATIONAL SCIENCE FOUNDATION**

*Sec. 4001. Authorization of appropriations.*

*Sec. 4002. Strengthening of education and human resources directorate through equitable distribution of new funds.*

*Sec. 4003. Graduate fellowships and graduate traineeships.*

*Sec. 4004. Professional science master's degree programs.*

*Sec. 4005. Increased support for science education through the National Science Foundation.*

*Sec. 4006. Meeting critical national science needs.*

*Sec. 4007. Reaffirmation of the merit-review process of the National Science Foundation.*

*Sec. 4008. Experimental Program to Stimulate Competitive Research.*

*Sec. 4009. Encouraging participation.*

*Sec. 4010. Cyberinfrastructure.*

*Sec. 4011. Federal information and communications technology research.*

*Sec. 4012. Robert Noyce Teacher Program.*

*Sec. 4013. Sense of the Senate regarding the mathematics and science partnership programs of the Department of Education and the National Science Foundation.*

*Sec. 4014. National Science Foundation teacher institutes for the 21st century.*

*Sec. 4015. Partnerships for access to laboratory science.*

**DIVISION E—GENERAL PROVISIONS**

*Sec. 5001. Collection of data relating to trade in services.*

*Sec. 5002. Sense of the Senate regarding small business growth and capital markets.*

*Sec. 5003. Government Accountability Office Review of Activities, Grants, and Programs.*

*Sec. 5004. Prohibition against funding anti-competitiveness.*

*Sec. 5005. Feasibility study on free online college degree program.*

*Sec. 5006. Sense of the Senate regarding deemed exports.*

*Sec. 5007. Sense of the Senate regarding capital markets.*

1     ***DIVISION A—COMMERCE AND***  
 2                     ***SCIENCE***

3     ***SEC. 1001. SHORT TITLE.***

4             *This division may be cited as the “American Innovation and Competitiveness Act”.*

6     ***TITLE I—OFFICE OF SCIENCE***  
 7                     ***AND TECHNOLOGY POLICY;***  
 8                     ***GOVERNMENT-WIDE SCIENCE***

9     ***SEC. 1101. NATIONAL SCIENCE AND TECHNOLOGY SUMMIT.***

10            *(a) IN GENERAL.—Not later than 180 days after the*  
 11 *date of enactment of this Act, the President shall convene*  
 12 *a National Science and Technology Summit to examine the*  
 13 *health and direction of the United States’ science, tech-*  
 14 *nology, engineering, and mathematics enterprises. The*  
 15 *Summit shall include representatives of industry, small*  
 16 *business, labor, academia, State government, Federal re-*  
 17 *search and development agencies, non-profit environmental*  
 18 *and energy policy groups concerned with science and tech-*  
 19 *nology issues, and other nongovernmental organizations, in-*  
 20 *cluding representatives of science, technology, and engineer-*  
 21 *ing organizations and associations that represent individ-*

1 uals identified in section 33 or 34 of the Science and Engi-  
2 neering Equal Opportunities Act (42 U.S.C. 1885a or  
3 1885b).

4 (b) *REPORT.*—Not later than 90 days after the date  
5 of the conclusion of the Summit, the President shall issue  
6 a report on the results of the Summit. The report shall iden-  
7 tify key research and technology challenges and rec-  
8 ommendations, including recommendations to increase the  
9 representation of individuals identified in section 33 or 34  
10 of the Science and Engineering Equal Opportunities Act  
11 (42 U.S.C. 1885a or 1885b) in science, engineering, and  
12 technology enterprises, for areas of investment for Federal  
13 research and technology programs to be carried out during  
14 the 5-year period beginning on the date the report is issued.

15 (c) *ANNUAL EVALUATION.*—Beginning in 2008, the  
16 Director of the Office of Science and Technology Policy shall  
17 publish and submit to Congress an annual report that con-  
18 tains recommendations for areas of investment for Federal  
19 research and technology programs, including a justification  
20 for each area identified in the report. Each report submitted  
21 during the 5-year period beginning on the date of the con-  
22 clusion of the Summit shall take into account any rec-  
23 ommendations made by the Summit.

1 **SEC. 1102. STUDY ON BARRIERS TO INNOVATION.**

2 (a) *IN GENERAL.*—Not later than 90 days after the  
3 date of enactment of this Act, the Director of the Office of  
4 Science and Technology Policy shall enter into a contract  
5 with the National Academy of Sciences to conduct and com-  
6 plete a study to identify, and to review methods to mitigate,  
7 new forms of risk for businesses beyond conventional oper-  
8 ational and financial risk that affect the ability to inno-  
9 vate, including studying and reviewing—

10 (1) *incentive and compensation structures that*  
11 *could effectively encourage long-term value creation*  
12 *and innovation;*

13 (2) *methods of voluntary and supplemental dis-*  
14 *closure by industry of intellectual capital, innovation*  
15 *performance, and indicators of future valuation;*

16 (3) *means by which government could work with*  
17 *industry to enhance the legal and regulatory frame-*  
18 *work to encourage the disclosures described in para-*  
19 *graph (2);*

20 (4) *practices that may be significant deterrents*  
21 *to United States businesses engaging in innovation*  
22 *risk-taking compared to foreign competitors;*

23 (5) *costs faced by United States businesses en-*  
24 *gaging in innovation compared to foreign competi-*  
25 *tors, including the burden placed on businesses by*  
26 *high and rising health care costs;*

1           (6) means by which industry, trade associations,  
2           and universities could collaborate to support research  
3           on management practices and methodologies for as-  
4           sessing the value and risks of longer term innovation  
5           strategies;

6           (7) means to encourage new, open, and collabo-  
7           rative dialogue between industry associations, regu-  
8           latory authorities, management, shareholders, labor,  
9           and other concerned interests to encourage appro-  
10          priate approaches to innovation risk-taking;

11          (8) incentives to encourage participation among  
12          institutions of higher education, especially those in  
13          rural and underserved areas, to engage in innovation;

14          (9) relevant Federal regulations that may dis-  
15          courage or encourage innovation;

16          (10) all provisions of the Internal Revenue Code  
17          of 1986, including tax provisions, compliance costs,  
18          and reporting requirements, that discourage innova-  
19          tion;

20          (11) the extent to which Federal funding pro-  
21          motes or hinders innovation;

22          (12) the extent to which individuals are being  
23          equipped with the knowledge and skills necessary for  
24          success in the 21st century workforce, as measured  
25          by—

1           (A) elementary school and secondary school  
2           student academic achievement on the State aca-  
3           demic assessments required under section  
4           1111(b)(3) of the Elementary and Secondary  
5           Education Act of 1965 (20 U.S.C. 6311 (b)(3)),  
6           especially in mathematics, science, and reading,  
7           identified by ethnicity, race, and gender;

8           (B) the rate of student entrance into insti-  
9           tutions of higher education, identified by eth-  
10          nicity, race, and gender, by type of institution,  
11          and barriers to access to institutions of higher  
12          education;

13          (C) the rates of—

14               (i) students successfully completing  
15               postsecondary education programs, identi-  
16               fied by ethnicity, race, and gender; and

17               (ii) certificates, associate degrees, and  
18               baccalaureate degrees awarded in the fields  
19               of science, technology, engineering, and  
20               mathematics, identified by ethnicity, race,  
21               and gender; and

22          (D) access to, and availability of, high qual-  
23          ity job training programs;

24          (13) the projected outcomes of increasing the  
25          number of individuals identified in section 33 or 34

1     *of the Science and Engineering Equal Opportunities*  
2     *Act (42 U.S.C. 1885a or 1885b) in science, tech-*  
3     *nology, engineering, and mathematics fields; and*

4             *(14) the identification of strategies to increase*  
5     *the participation of individuals identified in section*  
6     *33 or 34 of the Science and Engineering Equal Op-*  
7     *portunities Act (42 U.S.C. 1885a or 1885b) in*  
8     *science, technology, engineering, and mathematics*  
9     *fields.*

10     *(b) REPORT REQUIRED.—Not later than 1 year after*  
11     *entering into the contract required by subsection (a) and*  
12     *4 years after entering into such contract, the National*  
13     *Academy of Sciences shall submit to Congress a report on*  
14     *the study conducted under such subsection.*

15     *(c) AUTHORIZATION OF APPROPRIATIONS.—There are*  
16     *authorized to be appropriated to the National Academy of*  
17     *Sciences \$1,000,000 for fiscal year 2008 for the purpose of*  
18     *carrying out the study required under this section.*

19     **SEC. 1103. NATIONAL INNOVATION MEDAL.**

20     *Section 16 of the Stevenson-Wydler Technology Inno-*  
21     *vation Act of 1980 (15 U.S.C. 3711) is amended—*

22             *(1) by striking the section heading and inserting*  
23     **“SEC. 16. NATIONAL TECHNOLOGY AND INNO-**  
24     **VATION MEDAL.”**; and

1           (2) *in subsection (a), by striking “Technology*  
2           *Medal” and inserting “Technology and Innovation*  
3           *Medal”.*

4   **SEC. 1104. RELEASE OF SCIENTIFIC RESEARCH RESULTS.**

5           (a) *PRINCIPLES.—Not later than 90 days after the*  
6           *date of enactment of this Act, the Director of the Office of*  
7           *Science and Technology Policy, in consultation with the Di-*  
8           *rector of the Office of Management and Budget and the*  
9           *heads of all Federal civilian agencies that conduct scientific*  
10           *research, shall develop and issue an overarching set of prin-*  
11           *ciples to ensure the communication and open exchange of*  
12           *data and results to other agencies, policymakers, and the*  
13           *public of research conducted by a scientist employed by a*  
14           *Federal civilian agency and to prevent the intentional or*  
15           *unintentional suppression or distortion of such research*  
16           *findings. The principles shall encourage the open exchange*  
17           *of data and results of research undertaken by a scientist*  
18           *employed by such an agency and shall be consistent with*  
19           *existing Federal laws, including chapter 18 of title 35,*  
20           *United States Code (commonly known as the “Bayh-Dole*  
21           *Act”).*

22           (b) *IMPLEMENTATION.—Not later than 180 days after*  
23           *the date of enactment of this Act, the Director of the Office*  
24           *of Science and Technology Policy shall ensure that all civil-*  
25           *ian Federal agencies that conduct scientific research develop*

1 *specific policies and procedures regarding the public release*  
2 *of data and results of research conducted by a scientist em-*  
3 *ployed by such an agency consistent with the principles es-*  
4 *tablished under subsection (a). Such polices and procedures*  
5 *shall—*

6           (1) *specifically address what is and what is not*  
7 *permitted or recommended under such policies and*  
8 *procedures;*

9           (2) *be specifically designed for each such agency;*

10           (3) *be applied uniformly throughout each such*  
11 *agency; and*

12           (4) *be widely communicated and readily acces-*  
13 *sible to all employees of each such agency and the*  
14 *public.*

15 **SEC. 1105. SEMIANNUAL SCIENCE, TECHNOLOGY, ENGI-**  
16 **NEERING, AND MATHEMATICS DAYS.**

17 *It is the sense of Congress that the Director of the Office*  
18 *of Science and Technology Policy should—*

19           (1) *encourage all elementary and middle schools*  
20 *to observe a Science, Technology, Engineering, and*  
21 *Mathematics Day twice in every school year for the*  
22 *purpose of bringing in science, technology, engineer-*  
23 *ing, and mathematics mentors to provide hands-on*  
24 *lessons to excite and inspire students to pursue the*  
25 *science, technology, engineering, and mathematics*

1 *fields (including continuing education and career*  
2 *paths);*

3 *(2) initiate a program, in consultation with*  
4 *Federal agencies and departments, to provide support*  
5 *systems, tools (from existing outreach offices), and*  
6 *mechanisms to allow and encourage Federal employ-*  
7 *ees with scientific, technological, engineering, or*  
8 *mathematical responsibilities to reach out to local*  
9 *classrooms on such Science, Technology, Engineering,*  
10 *and Mathematics Days to instruct and inspire school*  
11 *children, focusing on real life science, technology, en-*  
12 *gineering, and mathematics-related applicable experi-*  
13 *ences along with hands-on demonstrations in order to*  
14 *demonstrate the advantages and direct applications of*  
15 *studying the science, technology, engineering, and*  
16 *mathematics fields; and*

17 *(3) promote Science, Technology, Engineering,*  
18 *and Mathematics Days involvement by private sector*  
19 *and institutions of higher education employees, in-*  
20 *cluding partnerships with scientific, engineering, and*  
21 *mathematical professional organizations representing*  
22 *individuals identified in section 33 or 34 of the*  
23 *Science and Engineering Equal Opportunities Act*  
24 *(42 U.S.C. 1885a or 1885b), in a manner similar to*

1        *the Federal employee involvement described in para-*  
2        *graph (2).*

3        **SEC. 1106. STUDY OF SERVICE SCIENCE.**

4        (a) *SENSE OF CONGRESS.*—*It is the sense of Congress*  
5        *that, in order to strengthen the competitiveness of United*  
6        *States enterprises and institutions and to prepare the peo-*  
7        *ple of the United States for high-wage, high-skill employ-*  
8        *ment, the Federal Government should better understand and*  
9        *respond strategically to the emerging management and*  
10       *learning discipline known as service science.*

11       (b) *STUDY.*—*Not later than 270 days after the date*  
12       *of enactment of this Act, the Director of the Office of Science*  
13       *and Technology Policy, through the National Academy of*  
14       *Sciences, shall conduct a study and report to Congress re-*  
15       *garding how the Federal Government should support,*  
16       *through research, education, and training, the emerging*  
17       *management and learning discipline known as service*  
18       *science.*

19       (c) *OUTSIDE RESOURCES.*—*In conducting the study*  
20       *under subsection (b), the National Academy of Sciences*  
21       *shall consult with leaders from 2- and 4-year institutions*  
22       *of higher education, as defined in section 101(a) of the*  
23       *Higher Education Act of 1965 (20 U.S.C. 1001(a)), leaders*  
24       *from corporations, and other relevant parties.*

1       (d) *SERVICE SCIENCE DEFINED.*—*In this section, the*  
2 *term “service science” means curricula, training, and re-*  
3 *search programs that are designed to teach individuals to*  
4 *apply scientific, engineering, and management disciplines*  
5 *that integrate elements of computer science, operations re-*  
6 *search, industrial engineering, business strategy, manage-*  
7 *ment sciences, and social and legal sciences, in order to en-*  
8 *courage innovation in how organizations create value for*  
9 *customers and shareholders that could not be achieved*  
10 *through such disciplines working in isolation.*

11                   **TITLE II—INNOVATION**  
12                   **PROMOTION**

13 **SEC. 1201. PRESIDENT’S COUNCIL ON INNOVATION AND**  
14                   **COMPETITIVENESS.**

15       (a) *IN GENERAL.*—*The President shall establish a*  
16 *President’s Council on Innovation and Competitiveness.*

17       (b) *DUTIES.*—*The Council’s duties shall include—*

18               (1) *monitoring implementation of public laws*  
19 *and initiatives for promoting innovation, including*  
20 *policies related to research funding, taxation, immi-*  
21 *gration, trade, and education that are proposed in*  
22 *this Act or in any other Act;*

23               (2) *providing advice to the President with re-*  
24 *spect to global trends in competitiveness and innova-*  
25 *tion and allocation of Federal resources in education,*

1 *job training, and technology research and develop-*  
2 *ment considering such global trends in competitive-*  
3 *ness and innovation;*

4 *(3) in consultation with the Director of the Of-*  
5 *fice of Management and Budget, developing a process*  
6 *for using metrics to assess the impact of existing and*  
7 *proposed policies and rules that affect innovation ca-*  
8 *pabilities in the United States;*

9 *(4) identifying opportunities and making rec-*  
10 *ommendations for the heads of executive agencies to*  
11 *improve innovation, monitoring, and reporting on the*  
12 *implementation of such recommendations;*

13 *(5) developing metrics for measuring the progress*  
14 *of the Federal Government with respect to improving*  
15 *conditions for innovation, including through talent*  
16 *development, investment, and infrastructure improve-*  
17 *ments; and*

18 *(6) submitting to the President and Congress an*  
19 *annual report on such progress.*

20 *(c) MEMBERSHIP AND COORDINATION.—*

21 *(1) MEMBERSHIP.—The Council shall be com-*  
22 *posed of the Secretary or head of each of the following:*

23 *(A) The Department of Commerce.*

24 *(B) The Department of Defense.*

25 *(C) The Department of Education.*

- 1           (D) *The Department of Energy.*
- 2           (E) *The Department of Health and Human*  
3 *Services.*
- 4           (F) *The Department of Homeland Security.*
- 5           (G) *The Department of Labor.*
- 6           (H) *The Department of the Treasury.*
- 7           (I) *The National Aeronautics and Space*  
8 *Administration.*
- 9           (J) *The Securities and Exchange Commis-*  
10 *sion.*
- 11          (K) *The National Science Foundation.*
- 12          (L) *The Office of the United States Trade*  
13 *Representative.*
- 14          (M) *The Office of Management and Budget.*
- 15          (N) *The Office of Science and Technology*  
16 *Policy.*
- 17          (O) *The Environmental Protection Agency.*
- 18          (P) *The Small Business Administration.*
- 19          (Q) *Any other department or agency des-*  
20 *ignated by the President.*
- 21          (2) *CHAIRPERSON.—The Secretary of Commerce*  
22 *shall serve as Chairperson of the Council.*
- 23          (3) *COORDINATION.—The Chairperson of the*  
24 *Council shall ensure appropriate coordination be-*  
25 *tween the Council and the National Economic Coun-*

1     *cil, the National Security Council, and the National*  
2     *Science and Technology Council.*

3             (4) *MEETINGS.*—*The Council shall meet on a*  
4     *semi-annual basis at the call of the Chairperson and*  
5     *the initial meeting of the Council shall occur not later*  
6     *than 6 months after the date of enactment of this Act.*

7     (d) *DEVELOPMENT OF INNOVATION AGENDA.*—

8             (1) *IN GENERAL.*—*The Council shall develop a*  
9     *comprehensive agenda for strengthening the innova-*  
10    *tion and competitiveness capabilities of the Federal*  
11    *Government, State governments, academia, and the*  
12    *private sector in the United States.*

13            (2) *CONTENTS.*—*The comprehensive agenda re-*  
14    *quired by paragraph (1) shall include the following:*

15                (A) *An assessment of current strengths and*  
16                *weaknesses of the United States investment in re-*  
17                *search and development.*

18                (B) *Recommendations for addressing weak-*  
19                *nesses and maintaining the United States as a*  
20                *world leader in research and development and*  
21                *technological innovation, including strategies for*  
22                *increasing the participation of individuals iden-*  
23                *tified in section 33 or 34 of the Science and En-*  
24                *gineering Equal Opportunities Act (42 U.S.C.*

1           1885a or 1885b) in science, technology, engineer-  
2           ing, and mathematics fields.

3           (C) *Recommendations for strengthening the*  
4           *innovation and competitiveness capabilities of*  
5           *the Federal government, State governments, aca-*  
6           *demia, and the private sector in the United*  
7           *States.*

8           (3) *ADVISORS.—*

9           (A) *RECOMMENDATION.—Not later than 30*  
10          *days after the date of enactment of this Act, the*  
11          *National Academy of Sciences, in consultation*  
12          *with the National Academy of Engineering, the*  
13          *Institute of Medicine, and the National Research*  
14          *Council, shall develop and submit to the Presi-*  
15          *dent a list of 50 individuals that are rec-*  
16          *ommended to serve as advisors to the Council*  
17          *during the development of the comprehensive*  
18          *agenda required by paragraph (1). The list of*  
19          *advisors shall include appropriate representa-*  
20          *tives from the following:*

21                   (i) *The private sector of the economy.*

22                   (ii) *Labor.*

23                   (iii) *Various fields including informa-*  
24                   *tion technology, energy, engineering, high-*

1            *technology manufacturing, health care, and*  
2            *education.*

3            *(iv) Scientific organizations.*

4            *(v) Academic organizations and other*  
5            *nongovernmental organizations working in*  
6            *the area of science or technology.*

7            *(vi) Nongovernmental organizations,*  
8            *such as professional organizations, that rep-*  
9            *resent individuals identified in section 33*  
10           *or 34 of the Science and Engineering Equal*  
11           *Opportunities Act (42 U.S.C. 1885a or*  
12           *1885b) in the areas of science, engineering,*  
13           *technology, and mathematics.*

14           *(B) DESIGNATION.—Not later than 30 days*  
15           *after the date that the National Academy of*  
16           *Sciences submits the list of recommended indi-*  
17           *viduals to serve as advisors, the President shall*  
18           *designate 50 individuals to serve as advisors to*  
19           *the Council.*

20           *(C) REQUIREMENT TO CONSULT.—The*  
21           *Council shall develop the comprehensive agenda*  
22           *required by paragraph (1) in consultation with*  
23           *the advisors.*

24           *(4) INITIAL SUBMISSION AND UPDATES.—*

1           (A) *INITIAL SUBMISSION.*—Not later than 1  
2           year after the date of enactment of this Act, the  
3           Council shall submit to Congress and the Presi-  
4           dent the comprehensive agenda required by para-  
5           graph (1).

6           (B) *UPDATES.*—At least once every 2 years,  
7           the Council shall update the comprehensive agen-  
8           da required by paragraph (1) and submit each  
9           such update to Congress and the President.

10          (e) *TECHNICAL AMENDMENT.*—Section 101(b) of the  
11 *High-Performance Computing Act of 1991 (15 U.S.C.*  
12 *5511(b)) is amended by striking “an” in the first sentence*  
13 *and inserting “a distinct”.*

14          (f) *OPTIONAL ASSIGNMENT.*—Notwithstanding sub-  
15 *section (a) and paragraphs (1) and (2) of subsection (c),*  
16 *the President may designate an existing council to carry*  
17 *out the requirements of this section.*

18 **SEC. 1202. INNOVATION ACCELERATION RESEARCH.**

19          (a) *PROGRAM ESTABLISHED.*—The President, through  
20 *the head of each Federal research agency, shall establish a*  
21 *program, to be known as the Innovation Acceleration Re-*  
22 *search Program, to support and promote innovation in the*  
23 *United States through research projects that can yield re-*  
24 *sults with far-ranging or wide-ranging implications but are*  
25 *considered too novel or span too diverse a range of dis-*

1 *ciplines to fare well in the traditional peer review process.*  
2 *Priority in the awarding of grants under this program shall*  
3 *be given to research projects that—*

4         (1) *meet fundamental technology or scientific*  
5 *challenges;*

6         (2) *involve multidisciplinary work; and*

7         (3) *involve a high degree of novelty.*

8         (b) *DEPARTMENTS AND AGENCIES.—*

9             (1) *FUNDING GOALS.—The President shall ensure*  
10 *that it is the goal of each Executive agency (as de-*  
11 *finied in section 105 of title 5, United States Code)*  
12 *that finances research in science, mathematics, engi-*  
13 *neering, and technology to allocate approximately 8*  
14 *percent of the agency’s total annual research and de-*  
15 *velopment budget to funding research, including*  
16 *grants, under the Innovation Acceleration Research*  
17 *Program.*

18             (2) *ADMINISTRATION.—*

19                 (A) *IN GENERAL.—Not later than 90 days*  
20 *after the date of enactment of this Act, the head*  
21 *of each Executive agency participating in the In-*  
22 *novation Acceleration Research Program under*  
23 *paragraph (1) shall submit to the Director of the*  
24 *Office of Science and Technology Policy and the*  
25 *Director of the Office of Management and Budget*

1           *a plan for implementing the research program*  
2           *within such Executive agency. An implementa-*  
3           *tion plan may incorporate existing initiatives of*  
4           *the Executive agencies that promote research in*  
5           *innovation as described in subsection (a).*

6           *(B) REQUIRED METRICS.—*

7                   *(i) IN GENERAL.—The head of each*  
8                   *Executive agency submitting an implemen-*  
9                   *tation plan pursuant to subparagraph (A)*  
10                   *shall include metrics upon which grant*  
11                   *funding decisions will be made and metrics*  
12                   *for assessing the success of the grants*  
13                   *awarded.*

14                   *(ii) METRICS FOR BASIC RESEARCH.—*

15                   *The metrics developed under clause (i) to*  
16                   *assess basic research programs shall assess*  
17                   *management of the programs and shall not*  
18                   *assess specific scientific outcomes of the re-*  
19                   *search conducted by the programs.*

20           *(C) GRANT DURATION AND RENEWALS.—*

21                   *(i) IN GENERAL.—Any grants issued*  
22                   *by an Executive agency under this section*  
23                   *shall be for a period not to exceed 3 years.*

24                   *(ii) EVALUATION.—Not later than 90*  
25                   *days prior to the expiration of a grant*

1           *issued under this section, the Executive*  
2           *agency that approved the grant shall com-*  
3           *plete an evaluation of the effectiveness of the*  
4           *grant based on the metrics established pur-*  
5           *suant to subparagraph (B). In its evalua-*  
6           *tion, the Executive agency shall consider the*  
7           *extent to which the program funded by the*  
8           *grant met the goals of quality improvement*  
9           *and job creation.*

10           (iii) *PUBLICATION OF REVIEW.—The*  
11           *Executive agency shall publish and make*  
12           *available to the public the review of each*  
13           *grant approved pursuant to this section.*

14           (iv) *FAILURE TO MEET METRICS.—*  
15           *Any grant that the Executive agency*  
16           *awarding the grant determines has failed to*  
17           *satisfy any of the metrics developed pursu-*  
18           *ant to subparagraph (B), shall not be eligi-*  
19           *ble for a renewal.*

20           (v) *RENEWAL.—A grant issued under*  
21           *this section that satisfies all of the metrics*  
22           *developed pursuant to subparagraph (B),*  
23           *may be renewed once for a period of not*  
24           *more than 3 years. Additional renewals*  
25           *may be considered only if the head of the*

1           *Executive agency makes a specific finding*  
2           *that the program being funded involves a*  
3           *significant technology or scientific advance*  
4           *that requires a longer time frame to com-*  
5           *plete critical research, and the research sat-*  
6           *isfies all the metrics developed pursuant to*  
7           *subparagraph (B).*

8                     *(vi) WAIVER.—The head of the Execu-*  
9                     *tive agency may authorize a waiver of the*  
10                    *requirement of clauses (iv) and (v) related*  
11                    *to satisfying metric requirements if he or*  
12                    *she determines that the grant failed to meet*  
13                    *a small number of metrics and the failure*  
14                    *was not significant for the overall perform-*  
15                    *ance of the grant.*

16           *(c) DEFINITIONS.—In this section:*

17                     *(1) FEDERAL RESEARCH AGENCY.—The term*  
18                     *“Federal research agency” means a major organiza-*  
19                     *tional component of a department or agency of the*  
20                     *Federal Government, or other establishment of the*  
21                     *Federal Government operating with appropriated*  
22                     *funds, that has as its primary purpose the perform-*  
23                     *ance of scientific research.*

24                     *(2) MAJOR ORGANIZATIONAL COMPONENT.—The*  
25                     *term “major organizational component”, with respect*

1     *to a department, agency, or other establishment of the*  
2     *Federal Government, means a component of the de-*  
3     *partment, agency, or other establishment that is ad-*  
4     *ministered by an individual whose rate of basic pay*  
5     *is not less than the rate of basic pay payable under*  
6     *level V of the Executive Schedule under section 5316*  
7     *of title 5, United States Code.*

8     **TITLE     III—NATIONAL     AERO-**  
9     **NAUTICS AND SPACE ADMIN-**  
10    **ISTRATION**

11  **SEC. 1301. NASA'S CONTRIBUTION TO INNOVATION.**

12     *(a) PARTICIPATION IN INTERAGENCY ACTIVITIES.—*  
13     *The National Aeronautics and Space Administration shall*  
14     *be a full participant in any interagency effort to promote*  
15     *innovation and economic competitiveness through near-*  
16     *term and long-term basic scientific research and develop-*  
17     *ment and the promotion of science, technology, engineering,*  
18     *and mathematics education, consistent with the agency mis-*  
19     *sion, including authorized activities.*

20     *(b) HISTORIC FOUNDATION.—In order to carry out the*  
21     *participation described in subsection (a), the Administrator*  
22     *of the National Aeronautics and Space Administration*  
23     *shall build on the historic role of the National Aeronautics*  
24     *and Space Administration in stimulating excellence in the*  
25     *advancement of physical science and engineering dis-*

1 *ciplines and in providing opportunities and incentives for*  
2 *the pursuit of academic studies in science, technology, engi-*  
3 *neering, and mathematics.*

4       (c) *BALANCED SCIENCE PROGRAM AND ROBUST AU-*  
5 *THORIZATION LEVELS.*—*The balanced science program au-*  
6 *thorized by section 101(d) of the National Aeronautics and*  
7 *Space Administration Authorization Act of 2005 (42 U.S.C.*  
8 *16611) shall be an element of the contribution by the Na-*  
9 *tional Aeronautics and Space Administration to such inter-*  
10 *agency programs. It is the sense of Congress that a robust*  
11 *National Aeronautics and Space Administration, funded at*  
12 *the levels authorized for fiscal years 2007 and 2008 under*  
13 *sections 202 and 203 of such Act (42 U.S.C. 16631 and*  
14 *16632) and at appropriate levels in subsequent fiscal years*  
15 *would enable a fair balance among science, aeronautics,*  
16 *education, exploration, and human space flight programs*  
17 *and allow full participation in any interagency efforts to*  
18 *promote innovation and economic competitiveness.*

19       (d) *ANNUAL REPORT.*—

20           (1) *REQUIREMENT.*—*The Administrator shall*  
21 *submit to Congress and the President an annual re-*  
22 *port describing the activities conducted pursuant to*  
23 *this section, including a description of the goals and*  
24 *the objective metrics upon which funding decisions*  
25 *were made.*

1           (2) *CONTENT.*—*Each report submitted pursuant*  
2 *to paragraph (1) shall include, with regard to science,*  
3 *technology, engineering, and mathematics education*  
4 *programs, at a minimum, the following:*

5                   (A) *A description of each program.*

6                   (B) *The amount spent on each program.*

7                   (C) *The number of students or teachers*  
8 *served by each program.*

9                   (D) *Measurement of how each program im-*  
10 *proved student achievement, including with re-*  
11 *gard to challenging State achievement standards.*

12 **SEC. 1302. AERONAUTICS INSTITUTE FOR RESEARCH.**

13           (a) *ESTABLISHMENT.*—

14                   (1) *IN GENERAL.*—*The Administrator of the Na-*  
15 *tional Aeronautics and Space Administration shall*  
16 *establish within the Administration an Aeronautics*  
17 *Institute for Research for the purpose of managing the*  
18 *aeronautics research carried out by the Administra-*  
19 *tion.*

20                   (2) *DIRECTOR.*—*The Institute shall be headed by*  
21 *a Director with appropriate experience in aeronautics*  
22 *research and development.*

23           (b) *DUTIES.*—*The Institute shall implement the pro-*  
24 *grams authorized under title IV of the National Aeronautics*

1 *and Space Administration Authorization Act of 2005 (42*  
2 *U.S.C. 16701 et seq.).*

3 *(c) COOPERATION WITH OTHER AGENCIES.—*

4 *(1) IN GENERAL.—The Institute shall operate in*  
5 *conjunction with relevant programs in the Depart-*  
6 *ment of Transportation, the Department of Defense,*  
7 *the Department of Commerce, and the Department of*  
8 *Homeland Security, including the activities of the*  
9 *Joint Planning and Development Office established*  
10 *under the Vision 100—Century of Aviation Reauthor-*  
11 *ization Act (Public Law 108–176; 117 Stat. 2490).*

12 *(2) RESOURCES.—The Director of the Institute*  
13 *may accept assistance, staff, and funding from those*  
14 *Departments and other Federal agencies. Any such*  
15 *funding shall be in addition to funds authorized for*  
16 *aeronautics under the National Aeronautics and*  
17 *Space Administration Authorization Act of 2005*  
18 *(Public Law 109–155).*

19 *(3) OTHER COORDINATION.—The Director of the*  
20 *Institute may utilize the Next Generation Air Trans-*  
21 *portation Senior Policy Committee established under*  
22 *section 710 of the Vision 100—Century of Aviation*  
23 *Reauthorization Act (Public Law 108–176; 49 U.S.C.*  
24 *40101 note) to coordinate its programs with other De-*  
25 *partments and agencies.*

1       (d) *PARTNERSHIPS.*—*In developing and carrying out*  
2 *its plans, the Institute shall consult with the public and*  
3 *ensure the participation of experts from the private sector*  
4 *including representatives of commercial aviation, general*  
5 *aviation, aviation labor groups, aviation research and de-*  
6 *velopment entities, aircraft and air traffic control sup-*  
7 *pliers, and the space industry.*

8 **SEC. 1303. BASIC RESEARCH ENHANCEMENT.**

9       (a) *IN GENERAL.*—*The Administrator of the National*  
10 *Aeronautics and Space Administration, the Director of the*  
11 *National Science Foundation, the Secretary of Energy, the*  
12 *Secretary of Defense, and Secretary of Commerce shall, to*  
13 *the extent practicable, coordinate basic and fundamental re-*  
14 *search activities related to physical sciences, technology, en-*  
15 *gineering and mathematics.*

16       (b) *ESTABLISHMENT OF BASIC RESEARCH EXECUTIVE*  
17 *COUNCIL.*—*In order to ensure effective application of re-*  
18 *sources to basic science activity and to facilitate cooperative*  
19 *basic and fundamental research activities with other gov-*  
20 *ernmental organizations, the Administrator of the National*  
21 *Aeronautics and Space Administration shall establish with-*  
22 *in the Administration a Basic Research Executive Council*  
23 *to oversee the distribution and management of programs*  
24 *and resources engaged in support of basic research activity.*

1       (c) *MEMBERSHIP.*—*The membership of the Basic Re-*  
2 *search Executive Council shall consist of the most senior*  
3 *agency official representing each of the following areas of*  
4 *research:*

5             (1) *Space Science.*

6             (2) *Earth Science.*

7             (3) *Life and Microgravity Sciences.*

8             (4) *Aeronautical Research.*

9       (d) *LEADERSHIP.*—*The Basic Research Executive*  
10 *Council shall be chaired by an individual appointed for*  
11 *that purpose who shall have, as a minimum, a appropriate*  
12 *graduate degree in a recognizable discipline in the physical*  
13 *sciences, and appropriate experience in the conduct and*  
14 *management of basic research activity. The Chairman of*  
15 *the Council shall report directly to the Administrator of the*  
16 *National Aeronautics and Space Administration.*

17       (e) *SUPPORTING RESOURCES AND PERSONNEL.*—*The*  
18 *Chairman of the Basic Research Executive Council shall be*  
19 *provided with adequate administrative staff support to con-*  
20 *duct the activity and functions of the Council.*

21       (f) *DUTIES.*—*The Basic Research Executive Council*  
22 *shall have, at minimum, the following duties:*

23             (1) *To establish criteria for the identification of*  
24 *research activity as basic in nature.*

1           (2) *To establish, in consultation with the Office*  
2 *of Science and Technology Policy, the National*  
3 *Science Foundation, the National Academy of*  
4 *Sciences, the National Institutes of Health, and other*  
5 *appropriate external organizations, a prioritization*  
6 *of fundamental research activity to be conducted by*  
7 *the National Aeronautics and Space Administration,*  
8 *to be reviewed and updated on an annual basis, tak-*  
9 *ing into consideration evolving national research pri-*  
10 *orities.*

11           (3) *To monitor, review, and evaluate all basic*  
12 *research activity of the National Aeronautics and*  
13 *Space Administration for compliance with basic re-*  
14 *search priorities established under paragraph (2).*

15           (4) *To make recommendations to the Adminis-*  
16 *trator of the National Aeronautics and Space Admin-*  
17 *istration regarding adjustments in the basic research*  
18 *activities of the Administration to ensure consistency*  
19 *with the research priorities established under this sec-*  
20 *tion.*

21           (5) *To provide an annual report to the Com-*  
22 *mittee on Commerce, Science, and Transportation of*  
23 *the Senate and the Committee on Science of the*  
24 *House of Representatives outlining the activities of*  
25 *the Council during the preceding year and the status*

1       *of basic research activity within the Administration.*  
2       *The initial such report, to serve as a baseline docu-*  
3       *ment, shall be provided within 90 days after the es-*  
4       *tablishment and initial operations of the Council.*

5       **SEC. 1304. AGING WORKFORCE ISSUES PROGRAM.**

6       *It is the sense of Congress that the Administrator of*  
7       *the National Aeronautics and Space Administration should*  
8       *implement a program to address aging work force issues*  
9       *in aerospace that—*

10               *(1) documents technical and management experi-*  
11               *ences before senior people leave the Administration,*  
12               *including—*

13                       *(A) documenting lessons learned;*

14                       *(B) briefing organizations;*

15                       *(C) providing opportunities for archiving*  
16               *lessons in a database; and*

17                       *(D) providing opportunities for near-term*  
18               *retirees to transition out early from their pri-*  
19               *mary assignment in order to document their ca-*  
20               *reer lessons learned and brief new employees*  
21               *prior to their separation from the Administra-*  
22               *tion;*

23               *(2) provides incentives for retirees to return and*  
24               *teach new employees about their career lessons and*  
25               *experiences; and*

1           (3) provides for the development of an award to  
2           recognize and reward outstanding senior employees  
3           for their contributions to knowledge sharing.

4 **SEC. 1305. CONFORMING AMENDMENTS.**

5           Section 101(d) of the National Aeronautics and Space  
6 Administration Authorization Act of 2005 (42 U.S.C.  
7 16611(d)) is amended—

8           (1) by striking “and” after the semicolon in  
9           paragraph (2)(B);

10           (2) by striking “Act.” in paragraph (2)(C) and  
11           inserting “Act; and”;

12           (3) by adding at the end of paragraph (2) the  
13           following:

14                   “(D) the number and content of science ac-  
15                   tivities which are undertaken in support of  
16                   science missions described in subparagraph (A),  
17                   and the number and content of science activities  
18                   which may be considered as fundamental, or  
19                   basic research, whether incorporated within spe-  
20                   cific missions or conducted independently of any  
21                   specific mission.”; and

22           (4) by adding at the end of paragraph (3) the  
23           following:

24                   “(H) How NASA science activities can best  
25                   be structured to ensure that basic and funda-

1           *mental research can be effectively maintained*  
2           *and coordinated in response to national goals in*  
3           *competitiveness and innovation, and in contrib-*  
4           *uting to national scientific, technology, engineer-*  
5           *ing and mathematics leadership.”.*

6 **SEC. 1306. FISCAL YEAR 2008 BASIC SCIENCE AND RE-**  
7           **SEARCH FUNDING.**

8           *Notwithstanding any other provision of law, the Ad-*  
9           *ministrator of the National Aeronautics and Space Admin-*  
10          *istration shall increase funding for basic science and re-*  
11          *search, including for the Explorer Program, for fiscal year*  
12          *2008 by \$160,000,000 by transferring such amount for such*  
13          *purpose from accounts of the National Aeronautics and*  
14          *Space Administration. The transfer shall be contingent*  
15          *upon the availability of unobligated balances to the Na-*  
16          *tional Aeronautics and Space Administration.*

17 **TITLE IV—NATIONAL INSTITUTE**  
18          **OF STANDARDS AND TECH-**  
19          **NOLOGY**

20 **SEC. 1401. AUTHORIZATION OF APPROPRIATIONS.**

21          *There are authorized to be appropriated to the Sec-*  
22          *retary of Commerce for the use of the National Institute*  
23          *of Standards and Technology—*

1           (1) *for fiscal year 2008, \$703,611,000, of which*  
2           *\$115,000,000 shall be used for the Hollings Manufac-*  
3           *turing Extension Partnership Program;*

4           (2) *for fiscal year 2009, \$773,972,000, of which*  
5           *\$122,005,000 shall be used for the Hollings Manufac-*  
6           *turing Extension Partnership Program;*

7           (3) *for fiscal year 2010, \$851,369,000, of which*  
8           *\$131,766,000 shall be used for the Hollings Manufac-*  
9           *turing Extension Partnership Program; and*

10          (4) *for fiscal year 2011, \$936,506,000, of which*  
11          *\$142,300,000 shall be used for the Hollings Manufac-*  
12          *turing Extension Partnership Program.*

13 **SEC. 1402. AMENDMENTS TO THE STEVENSON-WYDLER**  
14                                   **TECHNOLOGY INNOVATION ACT OF 1980.**

15          (a) *IN GENERAL.*—*Section 5 of the Stevenson-Wydler*  
16          *Technology Innovation Act of 1980 (15 U.S.C. 3704) is re-*  
17          *pealed.*

18          (b) *CONFORMING AMENDMENTS.*—

19                 (1) *TITLE 5, UNITED STATES CODE.*—*Section*  
20                 *5314 of title 5, United States Code, is amended by*  
21                 *striking “Under Secretary of Commerce for Tech-*  
22                 *nology.”.*

23                 (2) *DEFINITIONS.*—*Section 4 of the Stevenson-*  
24                 *Wydler Technology Innovation Act of 1980 (15 U.S.C.*  
25                 *3703) is amended—*

1           (A) by striking paragraphs (1) and (3); and  
2           (B) by redesignating paragraphs (2)  
3 through (13) as paragraphs (1) through (11), re-  
4 spectively.

5           (3) *REPEAL OF AUTHORIZATION*.—Section 21(a)  
6 of the *Stevenson-Wydler Technology Innovation Act of*  
7 *1980 (15 U.S.C. 3713(a)) is amended—*

8           (A) in paragraph (1), by striking “sections  
9 5, 11(g), and 16” and inserting “sections 11(g)  
10 and 16”; and

11           (B) in paragraph (2), by striking  
12 “\$500,000 is authorized only for the purpose of  
13 carrying out the requirements of the Japanese  
14 technical literature program established under  
15 section 5(d) of this Act;”.

16           (4) *HIGH-PERFORMANCE COMPUTING ACT OF*  
17 *1991*.—Section 208 of the *High-Performance Com-*  
18 *puting Act of 1991 (15 U.S.C. 5528) is amended by*  
19 *striking subsection (c) and redesignating subsection*  
20 *(d) as subsection (c).*

21           (5) *ASSISTIVE TECHNOLOGY ACT OF 1998*.—Sec-  
22 *tion 6(b)(4)(B)(v) of the Assistive Technology Act of*  
23 *1998 (29 U.S.C. 3005(b)(4)(B)(v)) is amended by*  
24 *striking “the Technology Administration of the De-*

1        *partment of Commerce,” and inserting “the National*  
2        *Institute of Standards and Technology,”.*

3        **SEC. 1403. INNOVATION ACCELERATION.**

4        *(a) PROGRAM.—In order to implement section 1202 of*  
5        *this Act, the Director of the National Institute of Standards*  
6        *and Technology shall—*

7                *(1) establish a program linked to the goals and*  
8                *objectives of the measurement laboratories, to be*  
9                *known as the “Standards and Technology Accelera-*  
10              *tion Research Program”, to support and promote in-*  
11              *novation in the United States through high-risk, high-*  
12              *reward research; and*

13              *(2) set aside, from funds available to the meas-*  
14              *urement laboratories, an amount equal to not less*  
15              *than 8 percent of the funds available to the Institute*  
16              *each fiscal year for such Program.*

17        *(b) EXTERNAL FUNDING.—The Director shall ensure*  
18        *that at least 80 percent of the funds available for such Pro-*  
19        *gram shall be used to award competitive, merit-reviewed*  
20        *grants, cooperative agreements, or contracts to public or*  
21        *private entities, including businesses and universities. In*  
22        *selecting entities to receive such assistance, the Director*  
23        *shall ensure that the project proposed by an entity has sci-*  
24        *entific and technical merit and that any resulting intellec-*  
25        *tual property shall vest in a United States entity that can*

1 *commercialize the technology in a timely manner. Each ex-*  
2 *ternal project shall involve at least one small or medium-*  
3 *sized business and the Director shall give priority to joint*  
4 *ventures between small or medium-sized businesses and edu-*  
5 *cational institutions. Any grant shall be for a period not*  
6 *to exceed 3 years.*

7       (c) *COMPETITIONS.*—*The Director shall solicit pro-*  
8 *posals annually to address areas of national need for high-*  
9 *risk, high-reward research, as identified by the Director.*

10       (d) *ANNUAL REPORT.*—*Each year the Director shall*  
11 *issue an annual report describing the program’s activities,*  
12 *including include a description of the metrics upon which*  
13 *grant funding decisions were made in the previous fiscal*  
14 *year, any proposed changes to those metrics, metrics for*  
15 *evaluating the success of ongoing and completed grants, and*  
16 *an evaluation of ongoing and completed grants. The first*  
17 *annual report shall include best practices for management*  
18 *of programs to stimulate high-risk, high-reward research.*

19       (e) *ADMINISTRATIVE EXPENSES.*—*No more than 5 per-*  
20 *cent of the finding available to the program may be used*  
21 *for administrative expenses.*

22       (f) *HIGH-RISK, HIGH-REWARD RESEARCH DE-*  
23 *FINED.*—*In this section, the term “high-risk, high-reward*  
24 *research” means research that—*

1           (1) *has the potential for yielding results with*  
2           *far-ranging or wide-ranging implications;*

3           (2) *addresses critical national needs related to*  
4           *measurement standards and technology; and*

5           (3) *is too novel or spans too diverse a range of*  
6           *disciplines to fare well in the traditional peer review*  
7           *process.*

8 **SEC. 1404. MANUFACTURING EXTENSION.**

9           (a) *MANUFACTURING CENTER EVALUATION.*—Section  
10 *25(c)(5) of the National Institute of Standards and Tech-*  
11 *nology Act (15 U.S.C. 278k(c)(5)) is amended by inserting*  
12 *“A Center that has not received a positive evaluation by*  
13 *the evaluation panel shall be notified by the panel of the*  
14 *deficiencies in its performance and shall be placed on pro-*  
15 *bation for one year, after which time the panel shall re-*  
16 *evaluate the Center. If the Center has not addressed the defi-*  
17 *ciencies identified by the panel, or shown a significant im-*  
18 *provement in its performance, the Director shall conduct*  
19 *a new competition to select an operator for the Center or*  
20 *may close the Center.” after “at declining levels.”.*

21           (b) *FEDERAL SHARE.*—Section 25 of the National In-  
22 *stitute of Standards and Technology Act (15 U.S.C. 278k)*  
23 *is amended by striking subsection (d) and inserting the fol-*  
24 *lowing:*

1       “(d) *ACCEPTANCE OF FUNDS.*—*In addition to such*  
2 *sums as may be appropriated to the Secretary and Director*  
3 *to operate the Centers program, the Secretary and Director*  
4 *also may accept funds from other Federal departments and*  
5 *agencies and under section 2(c)(7) from the private sector*  
6 *for the purpose of strengthening United States manufac-*  
7 *turing. Such funds from the private sector, if allocated to*  
8 *a Center or Centers, shall not be considered in the calcula-*  
9 *tion of the Federal share of capital and annual operating*  
10 *and maintenance costs under subsection (c).”.*

11 **SEC. 1405. EXPERIMENTAL PROGRAM TO STIMULATE COM-**  
12 **PETITIVE TECHNOLOGY.**

13       (a) *IN GENERAL.*—*The Director of the National Insti-*  
14 *tutes of Standards and Technology shall re-establish the Ex-*  
15 *perimental Program to Stimulate Competitive Technology.*  
16 *The purpose of the program shall be to strengthen the tech-*  
17 *nological competitiveness of those States that have histori-*  
18 *cally received less Federal research and development funds*  
19 *than a majority of the States have received.*

20       (b) *ARRANGEMENTS.*—*In carrying out the program,*  
21 *the Director shall cooperate with State, regional, or local*  
22 *science and technology-based economic development organi-*  
23 *zation and with representatives of small business firms and*  
24 *other appropriate technology-based businesses.*

1       (c) *GRANTS AND COOPERATIVE AGREEMENTS.*—*In*  
2 *carrying out the program, the Director may make grants*  
3 *or enter into cooperative agreements to provide for—*

- 4           (1) *technology research and development;*  
5           (2) *technology transfer from university research;*  
6           (3) *technology deployment and diffusion; and*  
7           (4) *the strengthening of technological and inno-*  
8 *vation capabilities through consortia comprised of—*  
9           (A) *technology-based small business firms;*  
10          (B) *industries and emerging companies;*  
11          (C) *institutions of higher education includ-*  
12 *ing community colleges; and*  
13          (D) *State and local development agencies*  
14 *and entities.*

15       (d) *REQUIREMENTS FOR MAKING AWARDS.*—

16           (1) *IN GENERAL.*—*In making awards under this*  
17 *section, the Director shall ensure that the awards are*  
18 *awarded on a competitive basis that includes a review*  
19 *of the merits of the activities that are the subject of*  
20 *the award, giving special emphasis to those projects*  
21 *which will increase the participation of women, Na-*  
22 *tive Americans (including Native Hawaiians and*  
23 *Alaska Natives), and underrepresented groups in*  
24 *science and technology.*

1           (2) *MATCHING REQUIREMENT.*—*The non-Federal*  
2           *share of the activities (other than planning activities)*  
3           *carried out under an award under this subsection*  
4           *shall be not less than 50 percent of the cost of those*  
5           *activities.*

6           (e) *CRITERIA FOR STATES.*—*The Director shall estab-*  
7           *lish criteria for achievement by each State that participates*  
8           *in the program. Upon the achievement of all such criteria,*  
9           *a State shall cease to be eligible to participate in the pro-*  
10          *gram.*

11          (f) *COORDINATION.*—*To the extent practicable, in car-*  
12          *rying out this subsection, the Director shall coordinate the*  
13          *program with other programs of the Department of Com-*  
14          *merce.*

15          (g) *REPORT.*—

16                (1) *IN GENERAL.*—*Not later than 90 days after*  
17                *the date of enactment of this Act, the Director shall*  
18                *prepare and submit to the Committee on Commerce,*  
19                *Science, and Transportation of the Senate and the*  
20                *Committee on Science of the House of Representatives*  
21                *a report that meets the requirements of this sub-*  
22                *section.*

23                (2) *REQUIREMENTS FOR REPORT.*—*The report*  
24                *required by this subsection shall contain—*

1           (A) a description of the structure and proce-  
2           dures of the program;

3           (B) a management plan for the program;

4           (C) a description of the merit-based review  
5           process to be used in the program;

6           (D) milestones for the evaluation of activi-  
7           ties to be assisted under the program in fiscal  
8           year 2008;

9           (E) an assessment of the eligibility of each  
10          State that participates in the Experimental Pro-  
11          gram to Stimulate Competitive Research of the  
12          National Science Foundation to participate in  
13          the program under this subsection; and

14          (F) the evaluation criteria with respect to  
15          which the overall management and effectiveness  
16          of the program will be evaluated.

17 **SEC. 1406. TECHNICAL AMENDMENTS TO THE NATIONAL IN-**  
18 **STITUTE OF STANDARDS AND TECHNOLOGY**  
19 **ACT AND OTHER TECHNICAL AMENDMENTS.**

20          (a) *RESEARCH FELLOWSHIPS.*—Section 18 of the Na-  
21          tional Institute of Standards and Technology Act (15  
22          U.S.C. 278g–1) is amended by striking “up to 1 per centum  
23          of the” in the first sentence.

24          (b) *FINANCIAL AGREEMENTS.*—

1           (1) *CLARIFICATION.*—Section 2(b)(4) of the Na-  
2           tional Institute of Standards and Technology Act (15  
3           U.S.C. 272(b)(4)) is amended by inserting “and  
4           grants and cooperative agreements,” after “arrange-  
5           ments,”.

6           (2) *MEMBERSHIPS.*—Section 2(c) of the National  
7           Institute of Standards and Technology Act (15 U.S.C.  
8           272(c)) is amended—

9                   (A) by striking “and” after the semicolon in  
10                  paragraph (21);

11                  (B) by redesignating paragraph (22) as  
12                  paragraph (23); and

13                  (C) by inserting after paragraph (21) the  
14                  following:

15                  “(22) notwithstanding subsection (b)(4) of this  
16                  section, sections 6301 through 6308 of title 31, United  
17                  States Code (commonly known as the ‘Grants and Co-  
18                  operative Agreements Act’), sections 3551 through  
19                  3556 of such title (commonly known as the ‘Competi-  
20                  tion in Contracting Act’), and the Federal Acquisi-  
21                  tion Regulations set forth in title 48, Code of Federal  
22                  Regulations, to expend appropriated funds for Na-  
23                  tional Institute of Standards and Technology mem-  
24                  berships in scientific organizations, registration fees

1     *for attendance at conferences, and sponsorship of con-*  
 2     *ferences in furtherance of technology transfer; and”.*

3     (c) *OUTDATED SPECIFICATIONS.—*

4             (1) *REDEFINITION OF METRIC SYSTEM.—Section*  
 5     *2 of the Act of July 28, 1866, entitled “An Act to au-*  
 6     *thorize the Use of the Metric System of Weights and*  
 7     *Measures” (15 U.S.C. 205; 14 Stat. 339) is amended*  
 8     *to read as follows:*

9     **“SEC. 2. METRIC SYSTEM DEFINED.**

10            *“The metric system of measurement shall be defined*  
 11     *as the International System of Units as established in 1960,*  
 12     *and subsequently maintained, by the General Conference of*  
 13     *Weights and Measures, and as interpreted or modified for*  
 14     *the United States by the Secretary of Commerce.”.*

15            (2) *REPEAL OF REDUNDANT AND OBSOLETE AU-*  
 16     *THORITY.—The Act of July 21, 1950, entitled, “An*  
 17     *Act To redefine the units and establish the standards*  
 18     *of electrical and photometric measurements of 1950”*  
 19     *(15 U.S.C. 223) is hereby repealed.*

20            (3) *IDAHO TIME ZONE.—Section 3 of the Act of*  
 21     *March 19, 1918, (commonly known as the “Calder*  
 22     *Act”)* (15 U.S.C. 264) *is amended—*

23            (A) *in the section heading, by striking*  
 24            **“third zone”** *and inserting “***fourth zone***”;*  
 25            *and*

1                   (B) by striking “third zone” and inserting  
2                   “fourth zone”.

3                   (4) *STANDARD TIME*.—Section 1 of the Act of  
4                   March 19, 1918, (commonly known as the “Calder  
5                   Act”) (15 U.S.C. 261) is amended—

6                   (A) by inserting “(a) *IN GENERAL*.—” be-  
7                   fore “For the purpose”;

8                   (B) by striking the second sentence and the  
9                   extra period after it and inserting “Except as  
10                  provided in section 3(a) of the Uniform Time  
11                  Act of 1966 (15 U.S.C. 260a), the standard time  
12                  of the first zone shall be Coordinated Universal  
13                  Time retarded by 4 hours; that of the second zone  
14                  retarded by 5 hours; that of the third zone re-  
15                  tarded by 6 hours; that of the fourth zone re-  
16                  tarded by 7 hours; that of the fifth zone retarded  
17                  8 hours; that of the sixth zone retarded by 9  
18                  hours; that of the seventh zone retarded by 10  
19                  hours; that of the eighth zone retarded by 11  
20                  hours; and that of the ninth zone shall be Coordi-  
21                  nated Universal Time advanced by 10 hours.”;  
22                  and

23                  (C) by adding at the end the following:

24                  “(b) *COORDINATED UNIVERSAL TIME DEFINED*.—In  
25                  this section, the term ‘Coordinated Universal Time’ means

1 *the time scale maintained through the General Conference*  
2 *of Weights and Measures and interpreted or modified for*  
3 *the United States by the Secretary of Commerce in coordi-*  
4 *nation with the Secretary of the Navy.”.*

5 (d) *NON-ENERGY INVENTIONS PROGRAM.—Section 27*  
6 *of the National Institute of Standards and Technology Act*  
7 *(15 U.S.C. 278m) is repealed.*

8 **SEC. 1407. CLARIFICATION OF ELIGIBLE CONTRIBUTIONS**  
9 **IN CONNECTION WITH REGIONAL CENTERS**  
10 **RESPONSIBLE FOR IMPLEMENTING THE OB-**  
11 **JECTIVES OF THE HOLLINGS MANUFAC-**  
12 **TURING PARTNERSHIP PROGRAM.**

13 *Paragraph (3) of section 25(c) of the National Insti-*  
14 *tute of Standards and Technology Act (15 U.S.C.*  
15 *278k(c)(3)) is amended to read as follows:*

16 “(3) *FINANCIAL SUPPORT.—*

17 “(A) *IN GENERAL.—Any nonprofit institu-*  
18 *tion, or group thereof, or consortia of nonprofit*  
19 *institutions, including entities existing on Au-*  
20 *gust 23, 1988, may submit to the Secretary an*  
21 *application for financial support under this sub-*  
22 *section, in accordance with the procedures estab-*  
23 *lished by the Secretary and published in the Fed-*  
24 *eral Register under paragraph (2).*

1           “(B) *CENTER CONTRIBUTIONS.*—*In order to*  
2           *receive assistance under this section, an appli-*  
3           *cant for financial assistance under subparagraph*  
4           *(A) shall provide adequate assurances that non-*  
5           *Federal assets obtained from the applicant and*  
6           *the applicant’s partnering organizations will be*  
7           *used as a funding source to meet not less than*  
8           *50 percent of the costs incurred for the first 3*  
9           *years and an increasing share for each of the*  
10           *last 3 years. For purposes of the preceding sen-*  
11           *tence, the costs incurred means the costs incurred*  
12           *in connection with the activities undertaken to*  
13           *improve the management, productivity, and*  
14           *technological performance of small- and medium-*  
15           *sized manufacturing companies.*

16           “(C) *AGREEMENTS WITH OTHER ENTI-*  
17           *TIES.*—*In meeting the 50 percent requirement, it*  
18           *is anticipated that a Center will enter into*  
19           *agreements with other entities such as private*  
20           *industry, universities, and State governments to*  
21           *accomplish programmatic objectives and access*  
22           *new and existing resources that will further the*  
23           *impact of the Federal investment made on behalf*  
24           *of small- and medium-sized manufacturing com-*  
25           *panies. All non-Federal costs, contributed by*

1           *such entities and determined by a Center as pro-*  
2           *grammatically reasonable and allocable are in-*  
3           *cludable as a portion of the Center's contribu-*  
4           *tion.*

5           “(D) *ALLOCATION OF LEGAL RIGHTS.—*  
6           *Each applicant under subparagraph (A) shall*  
7           *also submit a proposal for the allocation of any*  
8           *legal right associated with any invention that*  
9           *may result from an activity of a Center for*  
10           *which such applicant receives financial assist-*  
11           *ance under this section.”.*

12           ***TITLE V—OCEAN AND***  
13           ***ATMOSPHERIC PROGRAMS***

14           ***SEC. 1501. OCEAN AND ATMOSPHERIC RESEARCH AND DE-***  
15           ***VELOPMENT PROGRAM.***

16           *The Administrator of the National Oceanic and At-*  
17           *mospheric Administration, in consultation with the Direc-*  
18           *tor of the National Science Foundation and the Adminis-*  
19           *trator of the National Aeronautics and Space Administra-*  
20           *tion, shall establish a coordinated program of ocean, coast-*  
21           *al, Great Lakes, and atmospheric research and development,*  
22           *in collaboration with academic institutions and other non-*  
23           *governmental entities, that shall focus on the development*  
24           *of advanced technologies and analytical methods that will*  
25           *promote United States leadership in ocean and atmospheric*

1 *science and competitiveness in the applied uses of such*  
2 *knowledge.*

3 **SEC. 1502. NOAA OCEAN AND ATMOSPHERIC SCIENCE EDU-**  
4 **CATION PROGRAMS.**

5 (a) *IN GENERAL.*—*The Administrator of the National*  
6 *Oceanic and Atmospheric Administration shall conduct, de-*  
7 *velop, support, promote, and coordinate formal and infor-*  
8 *mal educational activities at all levels to enhance public*  
9 *awareness and understanding of ocean, coastal, Great*  
10 *Lakes, and atmospheric science and stewardship by the gen-*  
11 *eral public and other coastal stakeholders, including under-*  
12 *represented groups in ocean and atmospheric science and*  
13 *policy careers. In conducting those activities, the Adminis-*  
14 *trator shall build upon the educational programs and ac-*  
15 *tivities of the agency.*

16 (b) *NOAA SCIENCE EDUCATION PLAN.*—*The Adminis-*  
17 *trator, appropriate National Oceanic and Atmospheric Ad-*  
18 *ministration programs, ocean atmospheric science and edu-*  
19 *cation experts, and interested members of the public shall*  
20 *develop a science education plan setting forth education*  
21 *goals and strategies for the Administration, as well as pro-*  
22 *grammatic actions to carry out such goals and priorities*  
23 *over the next 20 years, and evaluate and update such plan*  
24 *every 5 years.*

1       (c) *CONSTRUCTION.*—*Nothing in this section may be*  
2 *construed to affect the application of section 438 of the Gen-*  
3 *eral Education Provisions Act (20 U.S.C. 1232a) or sec-*  
4 *tions 504 and 508 of the Rehabilitation Act of 1973 (29*  
5 *U.S.C. 794 and 794d).*

6 **SEC. 1503. NOAA’S CONTRIBUTION TO INNOVATION.**

7       (a) *PARTICIPATION IN INTERAGENCY ACTIVITIES.*—  
8 *The National Oceanic and Atmospheric Administration*  
9 *shall be a full participant in any interagency effort to pro-*  
10 *mote innovation and economic competitiveness through*  
11 *near-term and long-term basic scientific research and devel-*  
12 *opment and the promotion of science, technology, engineer-*  
13 *ing, and mathematics education, consistent with the agency*  
14 *mission, including authorized activities.*

15       (b) *HISTORIC FOUNDATION.*—*In order to carry out the*  
16 *participation described in subsection (a), the Administrator*  
17 *of the National Oceanic and Atmospheric Administration*  
18 *shall build on the historic role of the National Oceanic and*  
19 *Atmospheric Administration in stimulating excellence in*  
20 *the advancement of ocean and atmospheric science and en-*  
21 *gineering disciplines and in providing opportunities and*  
22 *incentives for the pursuit of academic studies in science,*  
23 *technology, engineering, and mathematics.*

1 **SEC. 1504. NOAA ACCOUNTABILITY AND TRANSPARENCY.**

2 (a) *REVIEW OF ACTIVITIES CARRIED OUT WITH*  
3 *NOAA FUNDS.—*

4 (1) *REQUIREMENT FOR REVIEW.—The Inspector*  
5 *General of the Department of Commerce shall conduct*  
6 *routine, independent reviews of the activities carried*  
7 *out with grants or other financial assistance made*  
8 *available by the Administrator of the National Oce-*  
9 *anic and Atmospheric Administration. Such reviews*  
10 *shall include cost-benefit analysis of such activities*  
11 *and reviews to determine if the goals of such activities*  
12 *are being accomplished.*

13 (2) *AVAILABILITY TO THE PUBLIC.—The Admin-*  
14 *istrator shall make each review conducted pursuant to*  
15 *paragraph (1) available to the public through the*  
16 *website of the Administration not later than 60 days*  
17 *after the date such review is completed.*

18 (b) *PROHIBITION ON USE OF NOAA FUNDS FOR*  
19 *MEETINGS.—No funds made available by the Adminis-*  
20 *trator through a grant or contract may be used by the per-*  
21 *son who received such grant or contract, including any sub-*  
22 *contractor to such person, for a banquet or conference, other*  
23 *than a conference related to training or a routine meeting*  
24 *with officers or employees of the Administration to discuss*  
25 *an ongoing project or training.*

1       (c) *PROHIBITION ON CONFLICTS OF INTEREST.*—Each  
2 person who receives funds from the Administrator through  
3 a grant or contract shall submit to the Administrator a cer-  
4 tification stating that none of such funds will be made  
5 available through a subcontract or in any other manner to  
6 another person who has a financial interest or other conflict  
7 of interest with the person who received such funds from  
8 the Administrator.

9       ***DIVISION B—DEPARTMENT OF***  
10                                   ***ENERGY***

11       ***SEC. 2001. SHORT TITLE.***

12       This division may be cited as the “Protecting Amer-  
13 ica’s Competitive Edge Through Energy Act” or the  
14 “PACE–Energy Act”.

15       ***SEC. 2002. DEFINITIONS.***

16       In this division:

17               (1) *DEPARTMENT.*—The term “Department”  
18 means the Department of Energy.

19               (2) *INSTITUTION OF HIGHER EDUCATION.*—The  
20 term “institution of higher education” has the mean-  
21 ing given in section 101(a) of the Higher Education  
22 Act of 1965 (20 U.S.C. 1001(a)).

23               (3) *NATIONAL LABORATORY.*—The term “Na-  
24 tional Laboratory” has the meaning given the term in

1 *section 2 of the Energy Policy Act of 2005 (42 U.S.C.*  
2 *15801).*

3 (4) *SECRETARY.*—*The term “Secretary” means*  
4 *the Secretary of Energy, acting through the Under*  
5 *Secretary for Science appointed under section 202(b)*  
6 *of the Department of Energy Organization Act (42*  
7 *U.S.C. 7132(b)).*

8 **SEC. 2003. MATHEMATICS, SCIENCE, AND ENGINEERING**  
9 **EDUCATION AT THE DEPARTMENT OF EN-**  
10 **ERGY.**

11 (a) *SCIENCE EDUCATION PROGRAMS.*—*Section 3164 of*  
12 *the Department of Energy Science Education Enhancement*  
13 *Act (42 U.S.C. 7381a) is amended—*

14 (1) *by redesignating subsections (b) through (d)*  
15 *as subsections (c) through (e), respectively;*

16 (2) *by inserting after subsection (a) the fol-*  
17 *lowing:*

18 “(b) *ORGANIZATION OF MATHEMATICS, SCIENCE, AND*  
19 *ENGINEERING EDUCATION PROGRAMS.*—

20 “(1) *DIRECTOR OF MATHEMATICS, SCIENCE AND*  
21 *ENGINEERING EDUCATION.*—*Notwithstanding any*  
22 *other provision of law, the Secretary, acting through*  
23 *the Under Secretary for Science (referred to in this*  
24 *subsection as the ‘Under Secretary’), shall appoint a*  
25 *Director of Mathematics, Science, and Engineering*

1     *Education (referred to in this subsection as the ‘Di-*  
2     *rector’) with the principal responsibility for admin-*  
3     *istering mathematics, science, and engineering edu-*  
4     *cation programs across all functions of the Depart-*  
5     *ment.*

6             “(2) *QUALIFICATIONS.—The Director shall be an*  
7     *individual, who by reason of professional background*  
8     *and experience, is specially qualified to advise the*  
9     *Under Secretary on all matters pertaining to mathe-*  
10    *matics, science, and engineering education at the De-*  
11    *partment.*

12            “(3) *DUTIES.—The Director shall—*

13                “(A) *oversee all mathematics, science, and*  
14     *engineering education programs of the Depart-*  
15     *ment;*

16                “(B) *represent the Department as the prin-*  
17     *cipal interagency liaison for all mathematics,*  
18     *science, and engineering education programs,*  
19     *unless otherwise represented by the Secretary or*  
20     *the Under Secretary;*

21                “(C) *prepare the annual budget and advise*  
22     *the Under Secretary on all budgetary issues for*  
23     *mathematics, science, and engineering education*  
24     *programs of the Department;*

1           “(D) increase, to the maximum extent prac-  
2           ticable, the participation and advancement of  
3           women and underrepresented minorities at every  
4           level of science, technology, engineering, and  
5           mathematics education; and

6           “(E) perform other such matters related to  
7           mathematics, science, and engineering education  
8           as are required by the Secretary or the Under  
9           Secretary.

10          “(4) STAFF AND OTHER RESOURCES.—The Sec-  
11          retary shall assign to the Director such personnel and  
12          other resources as the Secretary considers necessary to  
13          permit the Director to carry out the duties of the Di-  
14          rector.

15          “(5) ASSESSMENT.—

16          “(A) IN GENERAL.—The Secretary shall  
17          offer to enter into a contract with the National  
18          Academy of Sciences under which the National  
19          Academy, not later than 5 years after, and not  
20          later than 10 years after, the date of enactment  
21          of this paragraph, shall assess the performance of  
22          the mathematics, science, and engineering edu-  
23          cation programs of the Department.

24          “(B) CONSIDERATIONS.—An assessment  
25          under this paragraph shall be conducted taking

1           *into consideration, where applicable, the effect of*  
2           *mathematics, science, and engineering education*  
3           *programs of the Department on student aca-*  
4           *ademic achievement in math and science.*

5           “(6) *AUTHORIZATION OF APPROPRIATIONS.—*  
6           *There are authorized to be appropriated such sums as*  
7           *are necessary to carry out this subsection.”; and*

8           (3) *by striking subsection (d) (as redesignated by*  
9           *paragraph (1)) and inserting the following:*

10          “(d) *MATHEMATICS, SCIENCE, AND ENGINEERING*  
11 *EDUCATION FUND.—The Secretary shall establish a Mathe-*  
12 *matics, Science, and Engineering Education Fund, using*  
13 *not less than 0.3 percent of the amount made available to*  
14 *the Department for research, development, demonstration,*  
15 *and commercial application for each fiscal year, to carry*  
16 *out sections 3165, 3166, and 3167.”.*

17          (b) *CONSULTATION.—The Secretary shall—*

18           (1) *consult with the Secretary of Education re-*  
19 *garding activities authorized under subpart B of the*  
20 *Department of Energy Science Education Enhance-*  
21 *ment Act (as added by subsection (d)(3)) to improve*  
22 *mathematics and science education; and*

23           (2) *otherwise make available to the Secretary of*  
24 *Education reports associated with programs author-*  
25 *ized under that section.*

1       (c) *DEFINITION.*—Section 3168 of the Department of  
2 *Energy Science Education Enhancement Act* (42 U.S.C.  
3 7381d) is amended by adding at the end the following:

4               “(5) *NATIONAL LABORATORY.*—The term ‘*Na-*  
5 *tional Laboratory*’ has the meaning given the term in  
6 *section 2 of the Energy Policy Act of 2005* (42 U.S.C.  
7 15801).”.

8       (d) *MATHEMATICS, SCIENCE, AND ENGINEERING EDU-*  
9 *CATION PROGRAMS.*—The Department of Energy Science  
10 *Education Enhancement Act* (42 U.S.C. 7381 et seq.) is  
11 amended—

12               (1) by inserting after section 3162 the following:

13       **“Subpart A—Science Education Enhancement”;**

14               (2) in section 3169, by striking “part” and in-  
15 sserting “subpart”; and

16               (3) by adding at the end the following:

17       **“Subpart B—Mathematics, Science, and Engineering**  
18               **Education Programs**

19 **“SEC. 3170. DEFINITIONS.**

20       *“In this subpart:*

21               “(1) *DIRECTOR.*—The term ‘*Director*’ means the  
22 *Director of Mathematics, Science, and Engineering*  
23 *Education.*

24               “(2) *NATIONAL LABORATORY.*—The term ‘*Na-*  
25 *tional Laboratory*’ has the meaning given the term in

1 *section 2 of the Energy Policy Act of 2005 (42 U.S.C.*  
2 *15801).*

3 **“CHAPTER 1—ASSISTANCE FOR SPE-**  
4 **CIALTY SCHOOLS FOR MATHEMATICS**  
5 **AND SCIENCE**

6 **“SEC. 3171. SPECIALTY SCHOOLS FOR MATHEMATICS AND**  
7 **SCIENCE.**

8 *“(a) PURPOSE.—The purpose of this section is to pro-*  
9 *vide assistance to States to establish or expand public, state-*  
10 *wide specialty secondary schools that provide comprehensive*  
11 *mathematics and science (including engineering and tech-*  
12 *nology) education to improve the academic achievement of*  
13 *students in mathematics and science.*

14 *“(b) DEFINITION OF SPECIALTY SCHOOL FOR MATHE-*  
15 *MATICS AND SCIENCE.—In this chapter, the term ‘specialty*  
16 *school for mathematics and science’ means a public sec-*  
17 *ondary school (including a school that provides residential*  
18 *services to students) that—*

19 *“(1) serves students residing in the State in*  
20 *which the school is located; and*

21 *“(2) offers to those students a high-quality, com-*  
22 *prehensive mathematics and science (including engi-*  
23 *neering and technology) curriculum designed to im-*  
24 *prove the academic achievement of students in mathe-*  
25 *matics and science.*

1       “(c) *GRANTS AUTHORIZED.*—

2               “(1) *IN GENERAL.*—*From the amounts author-*  
3       *ized under subsection (i), the Secretary, acting*  
4       *through the Director, shall award grants, on a com-*  
5       *petitive basis, to States in order to provide assistance*  
6       *to the States for the costs of establishing or expanding*  
7       *public, statewide specialty schools for mathematics*  
8       *and science.*

9               “(2) *RESOURCES.*—*The Director shall ensure*  
10       *that appropriate resources of the Department, includ-*  
11       *ing the National Laboratories, are available to schools*  
12       *funded under this section in order to—*

13                       “(A) *increase experiential, hands-on learn-*  
14       *ing opportunities in mathematics, science, engi-*  
15       *neering, and technology for students attending*  
16       *such schools; and*

17                       “(B) *provide ongoing professional develop-*  
18       *ment opportunities for teachers employed at such*  
19       *schools.*

20               “(3) *ASSISTANCE.*—*Consistent with sections*  
21       *3165 and 3166, the Director shall make available nec-*  
22       *essary funds for a program using scientific and engi-*  
23       *neering staff of the National Laboratories, during*  
24       *which the staff—*

1           “(A) assists teachers in teaching courses at  
2           the schools funded under this section;

3           “(B) uses National Laboratory scientific  
4           equipment in teaching the courses; and

5           “(C) uses distance education and other tech-  
6           nologies to provide assistance described in sub-  
7           paragraphs (A) and (B) to schools funded under  
8           this section that are not located near the Na-  
9           tional Laboratories.

10          “(4) RESTRICTION.—No State shall receive fund-  
11          ing for more than 1 specialty school for mathematics  
12          and science for a fiscal year.

13          “(d) FEDERAL AND NON-FEDERAL SHARES.—

14                 “(1) FEDERAL SHARE.—The Federal share of the  
15                 costs described in subsection (c)(1) shall not exceed 50  
16                 percent.

17                 “(2) NON-FEDERAL SHARE.—The non-Federal  
18                 share of the costs described in subsection (c)(1) shall  
19                 be—

20                         “(A) not less than 50 percent; and

21                         “(B) provided from non-Federal sources, in  
22                         cash or in kind, fairly evaluated, including serv-  
23                         ices.

24          “(e) APPLICATION.—Each State desiring a grant  
25          under this section shall submit an application to the Direc-

1 *tor at such time, in such manner, and accompanied by such*  
2 *information as the Director may require that describes—*

3           “(1) *the process by which and selection criteria*  
4 *with which the State will select and designate a school*  
5 *as a specialty school for mathematics and science in*  
6 *accordance with this section;*

7           “(2) *how the State will ensure that funds made*  
8 *available under this section are used to establish or*  
9 *expand a specialty school for mathematics and*  
10 *science—*

11           “(A) *in accordance with the activities de-*  
12 *scribed in subsection (g); and*

13           “(B) *that has the capacity to improve the*  
14 *academic achievement of all students in all core*  
15 *academic subjects, and particularly in mathe-*  
16 *matics and science;*

17           “(3) *how the State will measure the extent to*  
18 *which the school increases student academic achieve-*  
19 *ment on State academic achievement standards in*  
20 *mathematics, science, and, to the extent applicable,*  
21 *technology and engineering;*

22           “(4) *the curricula and materials to be used in*  
23 *the school;*

1           “(5) *the availability of funds from non-Federal*  
2           *sources for the non-Federal share of the costs of the*  
3           *activities authorized under this section; and*

4           “(6) *how the State will use technical assistance*  
5           *and support from the Department, including the Na-*  
6           *tional Laboratories, and other entities with experience*  
7           *and expertise in mathematics, science, technology,*  
8           *and engineering education, including institutions of*  
9           *higher education.*

10          “(f) *DISTRIBUTION.—In awarding grants under this*  
11          *section, the Director shall—*

12                 “(1) *ensure a wide, equitable distribution among*  
13                 *States that propose to serve students from urban and*  
14                 *rural areas; and*

15                 “(2) *provide equal consideration to States with-*  
16                 *out National Laboratories.*

17          “(g) *USES OF FUNDS.—*

18                 “(1) *IN GENERAL.—A State that receives a grant*  
19                 *under this section shall use the funds made available*  
20                 *through the grant to—*

21                         “(A) *employ proven strategies and methods*  
22                         *for improving student learning and teaching in*  
23                         *mathematics, science, technology, and engineer-*  
24                         *ing;*

1           “(B) integrate into the curriculum of the  
2 school comprehensive mathematics and science  
3 education, including instruction and assessments  
4 in mathematics, science, and to the extent appli-  
5 cable, technology and engineering that are  
6 aligned with the State’s academic content and  
7 student academic achievement standards (within  
8 the meaning of section 1111 of the Elementary  
9 and Secondary Education Act of 1965 (20  
10 U.S.C. 6311)), classroom management, profes-  
11 sional development, parental involvement, and  
12 school management; and

13           “(C) provide high-quality and continuous  
14 teacher and staff professional development.

15           “(2) SPECIAL RULE.—Grant funds under this  
16 section may be used for activities described in para-  
17 graph (1) only if the activities are directly related to  
18 improving student academic achievement in mathe-  
19 matics, science, and to the extent applicable, tech-  
20 nology and engineering.

21           “(h) EVALUATION AND REPORT.—

22           “(1) STATE EVALUATION AND REPORT.—

23           “(A) EVALUATION.—Each State that re-  
24 ceives a grant under this section shall develop  
25 and carry out an evaluation and accountability

1           *plan for the activities funded through the grant*  
2           *that measures the impact of the activities, in-*  
3           *cluding measurable objectives for improved stu-*  
4           *dent academic achievement on State mathe-*  
5           *matics, science, and, to the extent applicable,*  
6           *technology and engineering assessments.*

7           “(B) *REPORT.—The State shall submit to*  
8           *the Director a report containing the results of the*  
9           *evaluation and accountability plan.*

10          “(2) *REPORT TO CONGRESS.—Not later than 2*  
11          *years after the date of enactment of the PACE–En-*  
12          *ergy Act, the Director shall submit a report to the ap-*  
13          *propriate committees of Congress detailing the impact*  
14          *of the activities assisted with funds made available*  
15          *under this section.*

16          “(i) *AUTHORIZATION OF APPROPRIATIONS.—There are*  
17          *authorized to be appropriated to carry out this section—*

18                “(1) *\$20,000,000 for fiscal year 2008;*

19                “(2) *\$30,000,000 for fiscal year 2009;*

20                “(3) *\$40,000,000 for fiscal year 2010; and*

21                “(4) *\$50,000,000 for fiscal year 2011.*

1       **“CHAPTER 2—EXPERIENTIAL-BASED**  
2               **LEARNING OPPORTUNITIES**

3       **“SEC. 3175. EXPERIENTIAL-BASED LEARNING OPPORTUNI-**  
4               **TIES.**

5       “(a) *INTERNSHIPS AUTHORIZED.*—

6               “(1) *IN GENERAL.*—*From the amounts author-*  
7               *ized under subsection (f), the Secretary, acting*  
8               *through the Director, shall establish a summer intern-*  
9               *ship program for middle school and secondary school*  
10              *students that shall—*

11              “(A) *provide the students with internships*  
12              *at the National Laboratories;*

13              “(B) *promote experiential, hands-on learn-*  
14              *ing in mathematics, science, technology, or engi-*  
15              *neering; and*

16              “(C) *be of at least 2 weeks in duration.*

17              “(2) *RESIDENTIAL SERVICES.*—*The Director*  
18              *may provide residential services to students partici-*  
19              *parting in the Internship authorized under this chap-*  
20              *ter.*

21       “(b) *SELECTION CRITERIA.*—

22              “(1) *IN GENERAL.*—*The Director shall establish*  
23              *criteria to determine the sufficient level of academic*  
24              *preparedness necessary for a student to be eligible for*  
25              *an internship under this section.*

1           “(2) *PARTICIPATION.*—*The Director shall ensure*  
2 *the participation of students from a wide distribution*  
3 *of States, including States without National Labora-*  
4 *tories.*

5           “(3) *STUDENT ACHIEVEMENT.*—*The Director*  
6 *may consider the academic achievement of middle*  
7 *and secondary school students in determining eligi-*  
8 *bility under this section, in accordance with sub-*  
9 *section (1) and (2).*

10          “(c) *PRIORITY.*—

11           “(1) *IN GENERAL.*—*The Director shall give pri-*  
12 *ority for an internship under this section to a student*  
13 *who meets the eligibility criteria described in sub-*  
14 *section (b) and who attends a school—*

15           “(A)(i) *in which not less than 30 percent of*  
16 *the children enrolled in the school are from low-*  
17 *income families; or*

18           “(ii) *that is designated with a school locale*  
19 *code of 6, 7, or 8, as determined by the Secretary*  
20 *of Education; and*

21           “(B) *for which there is—*

22           “(i) *a high percentage of teachers who*  
23 *are not teaching in the academic subject*  
24 *areas or grade levels in which the teachers*  
25 *were trained to teach;*

1                   “(ii) a high teacher turnover rate; or  
2                   “(iii) a high percentage of teachers  
3                   with emergency, provisional, or temporary  
4                   certification or licenses.

5                   “(2) COORDINATION.—The Director shall consult  
6                   with the Secretary of Education in order to determine  
7                   whether a student meets the priority requirements of  
8                   this subsection.

9                   “(d) OUTREACH AND EXPERIENTIAL-BASED PRO-  
10                  GRAMS FOR MINORITY STUDENTS.—

11                  “(1) IN GENERAL.—The Secretary, acting  
12                  through the Director, in cooperation with Hispanic-  
13                  serving institutions, historically Black colleges and  
14                  universities, tribally controlled colleges and univer-  
15                  sities, Alaska Native- and Native Hawaiian-serving  
16                  institutions, and other minority-serving institutions  
17                  and nonprofit entities with substantial experience re-  
18                  lating to outreach and experiential-based learning  
19                  projects, shall establish outreach and experiential-  
20                  based learning programs that will encourage under-  
21                  represented minority students in kindergarten  
22                  through grade 12 to pursue careers in math, science,  
23                  and engineering.

24                  “(2) COMMUNITY INVOLVEMENT.—The Secretary  
25                  shall ensure that the programs established under

1     *paragraph (1) involve, to the maximum extent*  
2     *practicable—*

3             “(A) *participation by parents and edu-*  
4             *cators; and*

5             “(B) *the establishment of partnerships with*  
6             *business organizations and appropriate Federal,*  
7             *State, and local agencies.*

8             “(3) *DISTRIBUTION.—The Secretary shall ensure*  
9             *that the programs established under paragraph (1)*  
10            *are located in diverse geographic regions of the*  
11            *United States, to the maximum extent practicable.*

12            “(e) *EVALUATION AND ACCOUNTABILITY PLAN.—The*  
13            *Director shall develop an evaluation and accountability*  
14            *plan for the activities funded under this chapter that objec-*  
15            *tively measures the impact of the activities.*

16            “(f) *AUTHORIZATION OF APPROPRIATIONS.—There is*  
17            *authorized to be appropriated to carry out this section*  
18            *\$15,000,000 for each of fiscal years 2008 through 2011.*

1 **“CHAPTER 3—NATIONAL LABORATORIES**  
2 **CENTERS OF EXCELLENCE IN MATHE-**  
3 **MATICS, SCIENCE, TECHNOLOGY, AND**  
4 **ENGINEERING EDUCATION**

5 **“SEC. 3181. NATIONAL LABORATORIES CENTERS OF EXCEL-**  
6 **LENCE IN MATHEMATICS, SCIENCE, TECH-**  
7 **NOLOGY, AND ENGINEERING EDUCATION.**

8 *“(a) DEFINITION OF HIGH-NEED PUBLIC SECONDARY*  
9 *SCHOOL.—In this chapter, the term ‘high-need public sec-*  
10 *ondary school’ means a secondary school—*

11 *“(1) with a high concentration of low-income in-*  
12 *dividuals (as defined in section 1707 of the Elemen-*  
13 *tary and Secondary Education Act of 1965 (20*  
14 *U.S.C. 6537)); or*

15 *“(2) designated with a school locale code of 6, 7,*  
16 *or 8, as determined by the Secretary of Education.*

17 *“(b) ESTABLISHMENT.—The Secretary shall establish*  
18 *at each of the National Laboratories a program to support*  
19 *a Center of Excellence in Mathematics, Science, Technology,*  
20 *and Engineering at 1 high-need public secondary school lo-*  
21 *cated in the region of the National Laboratory to provide*  
22 *assistance in accordance with subsection (f).*

23 *“(c) PARTNERSHIP.—Each high-need public secondary*  
24 *school selected as a Center of Excellence shall form a part-*  
25 *nership with a department that provides training for teach-*

1 *ers and principals at an institution of higher education for*  
2 *purposes of compliance with subsection (g).*

3 “(d) *SELECTION.—*

4 “(1) *IN GENERAL.—The Secretary, acting*  
5 *through the Director, shall establish criteria to guide*  
6 *the National Laboratories in selecting the sites of the*  
7 *Centers of Excellence.*

8 “(2) *PROCESS.—The National Laboratories shall*  
9 *select the sites of the Centers of Excellence through an*  
10 *open, widely publicized, and competitive process.*

11 “(e) *GOALS.—The Secretary shall establish goals and*  
12 *performance assessments for each Center of Excellence au-*  
13 *thorized under subsection (b).*

14 “(f) *ASSISTANCE.—Consistent with sections 3165 and*  
15 *3166, the Director shall make available necessary funds for*  
16 *a program using scientific and engineering staff of the Na-*  
17 *tional Laboratories, during which the staff—*

18 “(1) *assists teachers in teaching courses at the*  
19 *Centers of Excellence in Mathematics, Science, Tech-*  
20 *nology, and Engineering; and*

21 “(2) *uses National Laboratory scientific equip-*  
22 *ment in the teaching of the courses.*

23 “(g) *SPECIAL RULE.—Each Center of Excellence shall*  
24 *ensure—*

1           “(1) provision of clinical practicum, student  
2           teaching, or internship experiences for mathematics,  
3           science, and technology teacher candidates as part of  
4           its teacher preparation program;

5           “(2) provision of supervision and mentoring for  
6           teacher candidates in the teacher preparation pro-  
7           gram; and

8           “(3) to the maximum extent practicable, provi-  
9           sion of professional development for veteran teachers  
10          in the public secondary schools in the region.

11          “(h) *EVALUATION.*—The Secretary shall consider the  
12          results of performance assessments required under sub-  
13          section (e) in determining the contract award fee of a Na-  
14          tional Laboratory management and operations contractor.

15          “(i) *PLAN.*—The Director shall—

16               “(1) develop an evaluation and accountability  
17               plan for the activities funded under this chapter that  
18               objectively measures the impact of the activities; and

19               “(2) disseminate information obtained from  
20               those measurements.

21          “(j) *NO EFFECT ON SIMILAR PROGRAMS.*—Nothing in  
22          this section displaces or otherwise affects any similar pro-  
23          gram being carried out as of the date of enactment of this  
24          subpart at any National Laboratory under any other provi-  
25          sion of law.

1       **“CHAPTER 4—SUMMER INSTITUTES**

2       **“SEC. 3185. SUMMER INSTITUTES.**

3       “(a) *DEFINITIONS.—In this section:*

4               “(1) *ELIGIBLE PARTNER.—The term ‘eligible*  
5       *partner’ means—*

6                       “(A) *the mathematics, science, or engineer-*  
7       *ing department at an institution of higher edu-*  
8       *cation, acting in coordination with a depart-*  
9       *ment at an institution of higher education that*  
10       *provides training for teachers and principals; or*

11                      “(B) *a nonprofit entity with expertise in*  
12       *providing professional development for mathe-*  
13       *matics, science, or technology teachers.*

14               “(2) *SUMMER INSTITUTE.—The term ‘summer*  
15       *institute’ means an institute, conducted during the*  
16       *summer, that—*

17                      “(A) *is conducted for a period of not less*  
18       *than 2 weeks;*

19                      “(B) *includes, as a component, a program*  
20       *that provides direct interaction between students*  
21       *and faculty, including personnel of 1 or more*  
22       *National Laboratories who have scientific exper-*  
23       *tise; and*

1           “(C) provides for follow-up training, during  
2           the academic year, that is conducted in the class-  
3           room.

4           “(b) *SUMMER INSTITUTE PROGRAMS AUTHORIZED.*—

5           “(1) *PROGRAMS AT THE NATIONAL LABORA-*  
6           *TORIES.*—The Secretary, acting through the Director,  
7           shall establish or expand programs of summer insti-  
8           tutes at each of the National Laboratories to provide  
9           additional training to strengthen the mathematics,  
10          science, technology, and engineering teaching skills of  
11          teachers employed at public schools for kindergarten  
12          through grade 12, in accordance with the activities  
13          authorized under subsections (c) and (d).

14          “(2) *PROGRAMS WITH ELIGIBLE PARTNERS.*—

15          “(A) *IN GENERAL.*—The Secretary, acting  
16          through the Director, shall identify and provide  
17          assistance to eligible partners to establish or ex-  
18          pand programs of summer institutes that pro-  
19          vide additional training to strengthen the mathe-  
20          matics, science, technology, and engineering  
21          teaching skills of teachers employed at public  
22          schools for kindergarten through grade 12, in ac-  
23          cordance with the activities authorized under  
24          subsections (c) and (d).

1           “(B) ASSISTANCE.—Consistent with sections  
2           3165 and 3166, the Director shall make available  
3           necessary funds for a program using scientific  
4           and engineering staff of the National Labora-  
5           tories, during which the staff—

6                   “(i) assists in providing training to  
7                   teachers at summer institutes; and

8                   “(ii) uses National Laboratory sci-  
9                   entific equipment in the training.

10           “(C) LIMITATION OF AMOUNT.—To carry  
11           out this paragraph, the Director may use not  
12           more than 50 percent of the amounts authorized  
13           under subsection (h) for a fiscal year.

14           “(c) REQUIRED ACTIVITIES.—Each program author-  
15           ized under subsection (b) shall—

16                   “(1) create opportunities for enhanced and ongo-  
17                   ing professional development for teachers that im-  
18                   proves the mathematics, science, technology, and engi-  
19                   neering content knowledge of such teachers;

20                   “(2) include material pertaining to recent devel-  
21                   opments in mathematics, science, technology, and en-  
22                   gineering pedagogy;

23                   “(3) provide training on the use and integration  
24                   of technology in the classroom;

1           “(4) directly relate to the curriculum and aca-  
2           demic areas in which the teachers provide instruction;

3           “(5) enhance the ability of the teachers to under-  
4           stand and use the challenging State academic content  
5           standards for mathematics, science, and, to the extent  
6           applicable, technology and engineering and to select  
7           appropriate curricula;

8           “(6) train teachers to use curricula that are—

9                   “(A) based on scientific research;

10                   “(B) aligned with challenging State aca-  
11           demic content standards; and

12                   “(C) object-centered, experiment-oriented,  
13           and concept- and content-based;

14           “(7) provide professional development activities,  
15           including supplemental and follow-up activities; and

16           “(8) allow for the exchange of best practices  
17           among the participants.

18           “(d) *PERMISSIBLE ACTIVITIES*.—A program author-  
19           ized under subsection (b) may include—

20                   “(1) a program that provides teachers with op-  
21           portunities to work under the guidance of experienced  
22           teachers and college faculty;

23                   “(2) instruction in the use and integration of  
24           data and assessments to inform and instruct class-  
25           room practice; and

1           “(3) *extended master teacher programs.*

2           “(e) *PRIORITY.—To the maximum extent practicable,*  
3 *the Director shall ensure that each summer institute pro-*  
4 *gram authorized under subsection (b) provides training*  
5 *to—*

6           “(1) *teachers from a wide range of school dis-*  
7 *tricts;*

8           “(2) *teachers from disadvantaged school districts;*  
9 *and*

10           “(3) *teachers from groups underrepresented in*  
11 *the fields of mathematics, science, technology, and en-*  
12 *gineering teaching, including women and members of*  
13 *minority groups.*

14           “(f) *COORDINATION AND CONSULTATION.—The Direc-*  
15 *tor shall consult and coordinate with the Secretary of Edu-*  
16 *cation and the Director of the National Science Foundation*  
17 *regarding the implementation of the programs authorized*  
18 *under subsection (b).*

19           “(g) *EVALUATION AND ACCOUNTABILITY PLAN.—*

20           “(1) *IN GENERAL.—The Director shall develop*  
21 *an evaluation and accountability plan for the activi-*  
22 *ties funded under this section that measures the im-*  
23 *pect of the activities.*

24           “(2) *CONTENTS.—The evaluation and account-*  
25 *ability plan shall include—*

1           “(A) measurable objectives to increase the  
2           number of mathematics, science, and technology  
3           teachers who participate in the summer insti-  
4           tutes involved; and

5           “(B) measurable objectives for improved stu-  
6           dent academic achievement on State mathe-  
7           matics, science, and to the extent applicable,  
8           technology and engineering assessments.

9           “(3) REPORT TO CONGRESS.—The Secretary  
10          shall submit to Congress with the annual budget sub-  
11          mission of the Secretary a report on how the activities  
12          assisted under this section improve the mathematics,  
13          science, technology, and engineering teaching skills of  
14          participating teachers.

15          “(h) AUTHORIZATION OF APPROPRIATIONS.—There  
16          are authorized to be appropriated to carry out this  
17          section—

18                 “(1) \$25,000,000 for fiscal year 2008;

19                 “(2) \$40,000,000 for fiscal year 2009;

20                 “(3) \$50,000,000 for fiscal year 2010; and

21                 “(4) \$75,000,000 for fiscal year 2011.

1           **“CHAPTER 5—NUCLEAR SCIENCE**  
2                                   **EDUCATION**

3   **“SEC. 3191. NUCLEAR SCIENCE TALENT EXPANSION PRO-**  
4                                   **GRAM FOR INSTITUTIONS OF HIGHER EDU-**  
5                                   **CATION.**

6           “(a) *PURPOSES.*—*The purposes of this section are—*

7                           “(1) *to address the decline in the number of and*  
8                           *resources available to nuclear science programs of in-*  
9                           *stitutions of higher education; and*

10                          “(2) *to increase the number of graduates with*  
11                          *degrees in nuclear science, an area of strategic impor-*  
12                          *tance to the economic competitiveness and energy se-*  
13                          *curity of the United States.*

14           “(b) *DEFINITION OF NUCLEAR SCIENCE.*—*In this sec-*  
15   *tion, the term ‘nuclear science’ includes—*

16                          “(1) *nuclear science;*

17                          “(2) *nuclear engineering;*

18                          “(3) *nuclear chemistry;*

19                          “(4) *radio chemistry; and*

20                          “(5) *health physics.*

21           “(c) *ESTABLISHMENT.*—*The Secretary, acting through*  
22   *the Director, shall establish in accordance with this section*  
23   *a program to expand and enhance institution of higher edu-*  
24   *cation nuclear science educational capabilities.*

1       “(d) *NUCLEAR SCIENCE PROGRAM EXPANSION*  
2 *GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.*—

3           “(1) *IN GENERAL.*—*The Secretary, acting*  
4 *through the Director, shall award up to 3 competitive*  
5 *grants for each fiscal year to institutions of higher*  
6 *education that establish new academic degree pro-*  
7 *grams in nuclear science.*

8           “(2) *ELIGIBILITY.*—*To be eligible for a grant*  
9 *under this subsection, an applicant shall partner with*  
10 *a National Laboratory or other eligible nuclear-re-*  
11 *lated entity, as determined by the Secretary.*

12          “(3) *CRITERIA.*—*Criteria for a grant awarded*  
13 *under this subsection shall be based on—*

14           “(A) *the potential to attract new students to*  
15 *the program;*

16           “(B) *academic rigor; and*

17           “(C) *the ability to offer hands-on learning*  
18 *opportunities.*

19          “(4) *DURATION AND AMOUNT.*—

20           “(A) *DURATION.*—*A grant under this sub-*  
21 *section shall be 5 years in duration.*

22           “(B) *AMOUNT.*—*An institution of higher*  
23 *education that receives a grant under this sub-*  
24 *section shall be eligible for up to \$1,000,000 for*  
25 *each year of the grant period.*

1           “(5) *USE OF FUNDS.*—*An institution of higher*  
2 *education that receives a grant under this subsection*  
3 *may use the grant to—*

4           “(A) *recruit and retain new faculty;*

5           “(B) *develop core and specialized course*  
6 *content;*

7           “(C) *encourage collaboration between fac-*  
8 *ulty and researchers in the nuclear science field;*  
9 *or*

10           “(D) *support outreach efforts to recruit stu-*  
11 *dents.*

12           “(e) *NUCLEAR SCIENCE COMPETITIVENESS GRANTS*  
13 *FOR INSTITUTIONS OF HIGHER EDUCATION.*—

14           “(1) *IN GENERAL.*—*The Secretary, acting*  
15 *through the Director shall award up to 10 competitive*  
16 *grants for each fiscal year to institutions of higher*  
17 *education with existing academic degree programs*  
18 *that produce graduates in nuclear science.*

19           “(2) *CRITERIA.*—*Criteria for a grant awarded*  
20 *under this subsection shall be based on the potential*  
21 *for increasing the number and academic quality of*  
22 *graduates in the nuclear sciences who enter into ca-*  
23 *reers in nuclear-related fields.*

24           “(3) *DURATION AND AMOUNT.*—

1           “(A) *DURATION.*—A grant under this sub-  
2           section shall be 5 years in duration.

3           “(B) *AMOUNT.*—An institution of higher  
4           education that receives a grant under this sub-  
5           section shall be eligible for up to \$500,000 for  
6           each year of the grant period.

7           “(4) *USE OF FUNDS.*—An institution of higher  
8           education that receives a grant under this subsection  
9           may use the grant to—

10           “(A) increase the number of graduates in  
11           nuclear science that enter into careers in the nu-  
12           clear science field;

13           “(B) enhance the teaching of advanced nu-  
14           clear technologies;

15           “(C) aggressively pursue collaboration op-  
16           portunities with industry and National Labora-  
17           tories;

18           “(D) bolster or sustain nuclear infrastruc-  
19           ture and research facilities of the institution of  
20           higher education, such as research and training  
21           reactors or laboratories; and

22           “(E) provide tuition assistance and sti-  
23           pends to undergraduate and graduate students.

24           “(f) *AUTHORIZATION OF APPROPRIATIONS.*—

1           “(1) *NUCLEAR SCIENCE PROGRAM EXPANSION*  
2           *GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.*—

3           *There are authorized to be appropriated to carry out*  
4           *subsection (d)—*

5                     “(A) \$9,000,000 for fiscal year 2008;

6                     “(B) \$13,000,000 for fiscal year 2009;

7                     “(C) \$18,000,000 for fiscal year 2010; and

8                     “(D) \$22,500,000 for fiscal year 2011.

9           “(2) *NUCLEAR SCIENCE COMPETITIVENESS*  
10           *GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.*—

11           *There are authorized to be appropriated to carry out*  
12           *subsection (e)—*

13                     “(A) \$11,000,000 for fiscal year 2008;

14                     “(B) \$16,500,000 for fiscal year 2009;

15                     “(C) \$22,000,000 for fiscal year 2010; and

16                     “(D) \$27,500,000 for fiscal year 2011.

17           **“CHAPTER 6—ADMINISTRATION**

18           **“SEC. 3195. MENTORING PROGRAM.**

19           “(a) *IN GENERAL.*—*As part of the programs estab-*  
20           *lished under chapters 1, 3, and 4, the Director shall estab-*  
21           *lish a program to recruit and provide mentors for women*  
22           *and underrepresented minorities who are interested in ca-*  
23           *reers in mathematics, science, and engineering. The pro-*  
24           *gram shall pair mentors with women and minorities who*  
25           *are in programs of study at specialty schools for mathe-*

1 *matics and science, Centers of Excellence, and summer in-*  
2 *stitutes established under chapters 1, 3, and 4, respectively.*

3 “(b) *PROGRAM EVALUATION.*—*The Secretary shall*  
4 *annually—*

5 “(1) *use metrics to evaluate the success of the*  
6 *programs established under subsection (a); and*

7 “(2) *submit to Congress a report that describes*  
8 *the results of each evaluation.*”.

9 **“CHAPTER 7—NATIONAL ENERGY**

10 **EDUCATION DEVELOPMENT**

11 **“SEC. 3196. NATIONAL ENERGY EDUCATION DEVELOPMENT.**

12 “(a) *PURPOSE.*—*The purpose of this section is to en-*  
13 *able all students to reach or exceed grade-level academic*  
14 *achievement standards and to enhance the knowledge of the*  
15 *students of the science of energy, the sources of energy, the*  
16 *uses of energy in society, and the environmental con-*  
17 *sequences and benefits of all energy sources and uses by—*

18 “(1) *improving instruction in science related to*  
19 *energy for students in kindergarten through grade 9*  
20 *through the implementation of energy education pro-*  
21 *grams and with the support of comprehensive science*  
22 *education initiatives that are based on the best avail-*  
23 *able evidence of effectiveness; and*

24 “(2) *providing professional development and in-*  
25 *structional leadership activities for teachers and, if*

1       *appropriate, for administrators and other school staff,*  
2       *on the implementation of comprehensive mathematics*  
3       *initiatives designed—*

4               “(A) *to improve the understanding of stu-*  
5                *dents of the scientific, economic, and environ-*  
6                *mental impacts of energy;*

7               “(B) *to improve the knowledge of teachers,*  
8                *administrators, and other school staff related to*  
9                *the scientific content of energy;*

10              “(C) *to increase the use of effective instruc-*  
11               *tional practices; and*

12              “(D) *to reflect science content that is con-*  
13               *sistent with State academic achievement stand-*  
14               *ards in mathematics described in section 1111(b)*  
15               *of the Elementary and Secondary Education Act*  
16               *of 1965 (20 U.S.C. 6311(b)).*

17       “(b) *PROGRAM.—The Secretary (acting through the*  
18        *Director) (referred to in this section as the ‘Secretary’) shall*  
19        *provide grants to States to assist the States in establishing*  
20        *or expanding programs to enhance the quality of science*  
21        *education in elementary schools with respect to conven-*  
22        *tional and emerging energy sources and uses.*

23       “(c) *COORDINATION.—In carrying out this section, the*  
24        *Secretary shall use and coordinate with existing State and*  
25        *national programs that have a similar mission.*

1       “(d) *GRANTS.*—*The Secretary shall award grants, on*  
2 *a competitive basis, under this section to States to pay the*  
3 *Federal share of the costs of establishing or expanding high-*  
4 *quality energy education curricula and programs.*

5       “(e) *PROGRAMS.*—*In carrying out this section, the*  
6 *Secretary shall award grants to establish or expand pro-*  
7 *grams that enhance—*

8               “(1) *the quality of science education in elemen-*  
9 *tary schools with respect to conventional and emerg-*  
10 *ing energy sources and uses; and*

11              “(2) *the understanding of students of the science,*  
12 *economics, and environmental impacts of energy pro-*  
13 *duction and consumption.*

14       “(f) *FEDERAL AND NON-FEDERAL SHARES.*—

15              “(1) *FEDERAL SHARE.*—*The Federal share of the*  
16 *costs of carrying out a program under this section*  
17 *shall be 50 percent.*

18              “(2) *NON-FEDERAL SHARE.*—*The non-Federal*  
19 *share of the costs of carrying out a program under*  
20 *this section may be provided in the form of cash or*  
21 *in-kind contributions, fairly evaluated, including*  
22 *services.*

23       “(g) *DISTRIBUTION.*—*In awarding grants under this*  
24 *section, the Secretary shall—*

1           “(1) ensure a wide, equitable distribution of  
2           grants among States that propose to serve students  
3           from urban and rural areas; and

4           “(2) provide equal consideration to States with-  
5           out National Laboratories.

6           “(h) USES OF FUNDS.—

7           “(1) IN GENERAL.—Subject to paragraph (2),  
8           States, or other entities through States, that receive  
9           grants under this section shall use the grant funds  
10          to—

11           “(A) employ proven strategies and methods  
12           for improving student learning and teaching re-  
13           garding energy;

14           “(B) integrate into the curriculum of  
15           schools comprehensive, science-based, energy edu-  
16           cation, including instruction and assessments  
17           that are aligned with—

18           “(i) the academic content and student  
19           academic achievement standards of the  
20           State (within the meaning of section 1111  
21           of the Elementary and Secondary Edu-  
22           cation Act of 1965 (20 U.S.C. 6311));

23           “(ii) classroom management;

24           “(iii) professional development;

25           “(iv) parental involvement; and

1                   “(v) school management; and

2                   “(C) provide high-quality and continuous  
3                   teacher and staff professional development.

4                   “(2) *REQUIREMENTS.*—Grant funds under this  
5                   section may be used for activities described in para-  
6                   graph (1) only if the activities are directly related to  
7                   improving student academic achievement related to—

8                   “(A) the science of energy;

9                   “(B) the sources of energy;

10                  “(C) the uses of energy in society; and

11                  “(D) the environmental consequences and  
12                  benefits of all energy sources and uses.

13                  “(i) *AUTHORIZATION OF APPROPRIATIONS.*—There are  
14                  authorized to be appropriated to carry out this section—

15                  “(1) \$1,000,000 for each of fiscal years 2008 and  
16                  2009; and

17                  “(2) \$2,000,000 for each of fiscal years 2010 and  
18                  2011.”.

19 **SEC. 2004. DEPARTMENT OF ENERGY EARLY-CAREER RE-**  
20 **SEARCH GRANTS.**

21                  (a) *PURPOSE.*—It is the purpose of this section to au-  
22                  thorize research grants in the Department for early-career  
23                  scientists and engineers for purposes of pursuing inde-  
24                  pendent research.

1       (b) *DEFINITION OF ELIGIBLE EARLY-CAREER RE-*  
2 *SEARCHER.*—*In this section, the term “eligible early-career*  
3 *researcher” means an individual who—*

4           (1) *completed a doctorate or other terminal de-*  
5 *gree not more than 10 years before the date of appli-*  
6 *cation for a grant authorized under this section, ex-*  
7 *cept as provided in subsection (c)(3); and*

8           (2) *has demonstrated promise in the field of*  
9 *science, technology, engineering, mathematics, com-*  
10 *puter science, or computational science.*

11       (c) *GRANT PROGRAM AUTHORIZED.*—

12           (1) *IN GENERAL.*—*The Secretary shall award*  
13 *not less than 65 grants per year to outstanding eligi-*  
14 *ble early-career researchers to support the work of*  
15 *such researchers in the Department, particularly at*  
16 *the National Laboratories, or other federally-funded*  
17 *research and development centers.*

18           (2) *APPLICATION.*—*An eligible early-career re-*  
19 *searcher who desires to receive a grant under this sec-*  
20 *tion shall submit to the Secretary an application at*  
21 *such time, in such manner, and accompanied by such*  
22 *information as the Secretary may require.*

23           (3) *WAIVER.*—*The Secretary may find eligible a*  
24 *candidate who has completed a doctorate more than*  
25 *10 years prior to the date of application if the can-*

1 *didate was unable to conduct research for a period of*  
2 *time because of extenuating circumstances, including*  
3 *military service or family responsibilities.*

4 (4) *DURATION AND AMOUNT.—*

5 (A) *DURATION.—A grant under this section*  
6 *shall be 5 years in duration.*

7 (B) *AMOUNT.—An eligible early career-re-*  
8 *searcher who receives a grant under this section*  
9 *shall receive up to \$100,000 for each year of the*  
10 *grant period.*

11 (5) *USE OF FUNDS.—An eligible early career-re-*  
12 *searcher who receives a grant under this section shall*  
13 *use the grant funds for basic research in natural*  
14 *sciences, engineering, mathematics, or computer*  
15 *sciences at the Department, particularly the National*  
16 *Laboratories, or other federally-funded research and*  
17 *development center.*

18 (6) *AUTHORIZATION OF APPROPRIATIONS.—*

19 *There are authorized to be appropriated to carry out*  
20 *this section—*

21 (A) *\$13,000,000 for fiscal year 2008;*

22 (B) *\$19,500,000 for fiscal year 2009;*

23 (C) *\$26,000,000 for fiscal year 2010; and*

24 (D) *\$32,500,000 for fiscal year 2011.*

1 **SEC. 2005. ADVANCED RESEARCH PROJECTS AUTHORITY-**  
2 **ENERGY.**

3 (a) *DEFINITIONS.—In this section:*

4 (1) *ADVISORY BOARD.—The term “Advisory*  
5 *Board” means the Advisory Board established under*  
6 *subsection (d).*

7 (2) *AUTHORITY.—The term “Authority” means*  
8 *the Advanced Research Projects Authority—Energy*  
9 *established under subsection (b).*

10 (3) *DIRECTOR.—The term “Director” means the*  
11 *Director of the Authority appointed under subsection*  
12 *(c)(1).*

13 (4) *ENERGY TECHNOLOGY.—The term “energy*  
14 *technology” means technology, including carbon-neu-*  
15 *tral technology, used for—*

16 (A) *fossil energy;*

17 (B) *carbon sequestration;*

18 (C) *nuclear energy;*

19 (D) *renewable energy;*

20 (E) *energy distribution; or*

21 (F) *energy efficiency technology.*

22 (b) *ESTABLISHMENT.—The Secretary shall establish*  
23 *an Advanced Research Projects Authority-Energy to over-*  
24 *come the long-term and high-risk technological barriers in*  
25 *the development of energy technologies.*

26 (c) *DIRECTOR.—*

1           (1) *APPOINTMENT.*—*The Secretary shall appoint*  
2           *a Director of the Authority.*

3           (2) *QUALIFICATIONS.*—*The Director shall be an*  
4           *individual who, by reason of professional background*  
5           *and experience, is especially qualified to advise the*  
6           *Secretary on matters pertaining to long-term, high-*  
7           *risk programs to overcome long-term and high-risk*  
8           *technological barriers to the development of energy*  
9           *technologies.*

10          (3) *DUTIES.*—*The Director shall—*

11                (A) *employ such qualified technical staff as*  
12                *are necessary to carry out the duties of the Au-*  
13                *thority, including providing staff for the Advi-*  
14                *sory Committee;*

15                (B) *serve as the selection official for pro-*  
16                *posals relating to energy technologies that are so-*  
17                *licitated within the Department;*

18                (C) *develop metrics to assist in developing*  
19                *funding criteria and for assessing the success of*  
20                *existing programs;*

21                (D) *terminate programs carried out under*  
22                *this section that are not achieving the goals of*  
23                *the programs; and*

24                (E) *perform such duties relating to long-*  
25                *term and high-risk technological barriers in the*

1           *development of energy technologies as are deter-*  
2           *mined to be appropriate by the Secretary.*

3           *(d) ADVISORY BOARD.—*

4           *(1) APPOINTMENT.—The Secretary shall, con-*  
5           *sistent with the Federal Advisory Committee Act (5*  
6           *U.S.C. App.), establish, and appoint members to, an*  
7           *Advisory Board to make recommendations to the Sec-*  
8           *retary and the Director on actions necessary to carry*  
9           *out this section.*

10           *(2) QUALIFICATIONS.—The Advisory Board shall*  
11           *consist of individuals who, by reason of professional*  
12           *background and experience, are especially qualified to*  
13           *advise the Secretary and the Director on matters per-*  
14           *taining to long-term and high-risk technological bar-*  
15           *riers in the development of energy technologies.*

16           *(3) TERM.—A member of the Advisory Board*  
17           *shall be appointed for a term of 5 years.*

18           *(4) INFORMATION.—Each fiscal year, individuals*  
19           *who carry out energy technology programs of the De-*  
20           *partment and staff of the Authority shall provide to*  
21           *the Advisory Board written proposals and oral brief-*  
22           *ings on long-term and high-risk technological barriers*  
23           *that are critical to overcome for the successful develop-*  
24           *ment of energy technologies.*

1           (5) *DUTIES.*—*Each fiscal year, the Advisory*  
2     *Board shall—*

3           (A) *recommend to the Secretary and the*  
4     *Director—*

5           (i) *in order of priority, proposals of*  
6           *energy programs of the Department that are*  
7           *critical to overcoming long-term and high-*  
8           *risk technological barriers to enable the suc-*  
9           *cessful development of energy technologies;*  
10          *and*

11          (ii) *additional programs not covered in*  
12          *the proposals that are critical to overcoming*  
13          *the barriers described in clause (i); and*

14          (B) *based on the metrics described in sub-*  
15          *section (c)(3)(C), make recommendations to the*  
16          *Secretary and the Directory concerning whether*  
17          *programs funded under this section are achiev-*  
18          *ing the goals of the programs.*

19       (e) *REVIEW.*—*Not later than 1 year after the date of*  
20     *enactment of this Act, the Secretary shall enter into an*  
21     *agreement with the National Academy of Sciences under*  
22     *which the Academy shall—*

23           (1) *conduct reviews during each of calendar*  
24           *years 2010 and 2012 to determine the success of the*  
25           *activities carried out under this section; and*

1           (2) *submit to Congress, the Secretary, and the*  
 2           *Director a report describing the results of each review.*

3           (f) *AUTHORIZATION OF APPROPRIATIONS.—There are*  
 4           *authorized to be appropriated such sums as are necessary*  
 5           *to carry out this section for each of fiscal years 2008*  
 6           *through 2011.*

7   **SEC. 2006. AUTHORIZATION OF APPROPRIATIONS FOR THE**  
 8                           **DEPARTMENT OF ENERGY FOR BASIC RE-**  
 9                           **SEARCH.**

10          *Section 971(b) of the Energy Policy Act of 2005 (42*  
 11          *U.S.C. 16311(b)) is amended—*

12                 (1) *in paragraph (2), by striking “and” at the*  
 13                 *end;*

14                 (2) *in paragraph (3)—*

15                         (A) *by striking “\$5,200,000,000” and in-*  
 16                         *serting “\$4,800,000,000”; and*

17                         (B) *by striking the period at the end and*  
 18                         *inserting a semicolon; and*

19                 (3) *by adding at the end the following:*

20                         “(4) \$4,945,000,000 for fiscal year 2010; and

21                         “(5) \$5,265,000,000 for fiscal year 2011.”.

22   **SEC. 2007. DISCOVERY SCIENCE AND ENGINEERING INNO-**  
 23                           **VATION INSTITUTES.**

24           (a) *IN GENERAL.—The Secretary shall establish dis-*  
 25           *tributed, multidisciplinary institutes (referred to in this*

1 section as “Institutes”) centered at National Laboratories  
2 to apply fundamental science and engineering discoveries  
3 to technological innovations related to the missions of the  
4 Department and the global competitiveness of the United  
5 States.

6 (b) *TOPICAL AREAS.*—The Institutes shall support sci-  
7 entific and engineering research and education activities on  
8 critical emerging technologies determined by the Secretary  
9 to be essential to global competitiveness, including activities  
10 related to—

- 11 (1) *sustainable energy technologies;*
- 12 (2) *multi-scale materials and processes;*
- 13 (3) *micro- and nano-engineering;*
- 14 (4) *computational and information engineering;*
- 15 *and*
- 16 (5) *genomics and proteomics.*

17 (c) *PARTNERSHIPS.*—In carrying out this section, the  
18 Secretary shall establish partnerships between the Institutes  
19 and—

- 20 (1) *institutions of higher education to—*
  - 21 (A) *train undergraduate and graduate engi-*
  - 22 *neering and science students;*
  - 23 (B) *develop innovative educational cur-*
  - 24 *ricula; and*

1           (C) *conduct research within the topical*  
2           *areas described in subsection (b);*

3           (2) *private industry to develop innovative tech-*  
4           *nologies within the topical areas described in sub-*  
5           *section (b);*

6           (3) *State and local governments to promote re-*  
7           *gionally-based commercialization and entrepreneur-*  
8           *ship; and*

9           (4) *financing entities to guide successful tech-*  
10          *nology commercialization.*

11          (d) *MERIT-BASED SELECTION.*—*The selection of Insti-*  
12          *tutes under this section shall be merit-based and made*  
13          *through an open, competitive selection process.*

14          (e) *RESTRICTION.*—*Not more than 3 Institutes shall*  
15          *receive grants for a fiscal year.*

16          (f) *REVIEW.*—*The Secretary shall enter into an agree-*  
17          *ment with the National Academy of Sciences under which*  
18          *the Academy shall, not later than 3 and 6 years after the*  
19          *date of enactment of this Act—*

20                 (1) *review the performance of the Institutes*  
21                 *under this section; and*

22                 (2) *submit to Congress and the Secretary a re-*  
23                 *port describing the results of the review.*

24          (g) *AUTHORIZATION OF APPROPRIATIONS.*—*There is*  
25          *authorized to be appropriated to carry out the activities of*

1 *each Institute selected under this section \$10,000,000 for*  
2 *each of fiscal years 2008 through 2011.*

3 **SEC. 2008. PROTECTING AMERICA'S COMPETITIVE EDGE**  
4 **(PACE) GRADUATE FELLOWSHIP PROGRAM.**

5 (a) *DEFINITION OF ELIGIBLE STUDENT.*—*In this sec-*  
6 *tion, the term “eligible student” means a student who at-*  
7 *tends an institution of higher education that offers a doc-*  
8 *toral degree in a field relevant to a mission area of the De-*  
9 *partment.*

10 (b) *ESTABLISHMENT.*—*The Secretary shall establish a*  
11 *graduate fellowship program for eligible students pursuing*  
12 *a doctoral degree in a mission area of the Department.*

13 (c) *SELECTION.*—

14 (1) *IN GENERAL.*—*The Secretary shall award fel-*  
15 *lowships to eligible students under this section*  
16 *through a competitive merit review process (involving*  
17 *written and oral interviews) that will result in a*  
18 *wide distribution of awards throughout the United*  
19 *States.*

20 (2) *CRITERIA.*—*The Secretary shall establish se-*  
21 *lection criteria for awarding fellowships under this*  
22 *section that require an eligible student to—*

23 (A) *pursue a field of science or engineering*  
24 *of importance to the mission area of the Depart-*  
25 *ment;*

1           (B) rank in the upper 10 percent of the  
2           class of the eligible student;

3           (C) demonstrate to the Secretary—

4                 (i) the capacity to understand tech-  
5                 nical topics related to the fellowship that  
6                 can be derived from the first principles of  
7                 the technical topics;

8                 (ii) imagination and creativity;

9                 (iii) leadership skills in organizations  
10                or intellectual endeavors, demonstrated  
11                through awards and past experience; and

12                (iv) excellent verbal and communica-  
13                tion skills to explain, defend, and dem-  
14                onstrate an understanding of technical sub-  
15                jects related to the fellowship; and

16           (D) be a citizen or legal permanent resident  
17           of the United States.

18       (d) AWARDS.—

19           (1) AMOUNT.—A fellowship awarded under this  
20           section shall—

21                 (A) provide an annual living stipend; and

22                 (B) cover—

23                         (i) graduate tuition at an institution  
24                         of higher education; and

1                   (ii) *incidental expenses associated with*  
2                   *curricula and research at the institution of*  
3                   *higher education (including books, com-*  
4                   *puters and software).*

5                   (2) *DURATION.—A fellowship awarded under*  
6                   *this section shall be for a period of not greater than*  
7                   *5 years.*

8                   (3) *PORTABILITY.—A fellowship awarded under*  
9                   *this section shall be portable with the fellow.*

10                  (e) *ADMINISTRATION.—The Secretary (acting through*  
11 *the Director of Mathematics, Science, and Engineering*  
12 *Education)—*

13                   (1) *shall administer the program established*  
14 *under this section; and,*

15                   (2) *may enter into a contract with a nonprofit*  
16 *entity to administer the program, including the selec-*  
17 *tion and award of fellowships.*

18                  (f) *AUTHORIZATION OF APPROPRIATIONS.—*

19                   (1) *FELLOWSHIPS.—There are authorized to be*  
20 *appropriated to award fellowships under this*  
21 *section—*

22                               (A) *\$9,300,000 for 200 fellowships for fiscal*  
23 *year 2008;*

1           (B) \$14,500,000 for 300 fellowships for fis-  
2           cal year 2009 (including non-expiring fellow-  
3           ships for prior fiscal years);

4           (C) \$25,000,000 for 500 fellowships for fis-  
5           cal year 2010 (including non-expiring fellow-  
6           ships for prior fiscal years); and

7           (D) \$35,500,000 for 700 fellowships for fis-  
8           cal year 2011 (including non-expiring fellow-  
9           ships for prior fiscal years).

10          (2) *ADMINISTRATION.*—*There are authorized to*  
11          *be appropriated for administrative expenses incurred*  
12          *in carrying out this section—*

13                 (A) \$1,000,000 for fiscal year 2008;

14                 (B) \$1,500,000 for fiscal year 2009;

15                 (C) \$2,500,000 for fiscal year 2010; and

16                 (D) \$3,500,000 for fiscal year 2011.

17 **SEC. 2009. TITLE IX COMPLIANCE.**

18          (a) *IN GENERAL.*—*Not later than 180 days after the*  
19          *date of enactment of this Act, the Secretary of Energy shall*  
20          *submit to the Committee on Energy and Commerce of the*  
21          *House of Representatives and the Committee on Energy and*  
22          *Natural Resources of the Senate a report that describes ac-*  
23          *tions taken by the Department of Energy to implement the*  
24          *recommendations in the report of the Government Account-*  
25          *ability Office numbered 04–639.*

1       **(b) COMPLIANCE.**—*To comply with title IX of the Edu-*  
 2 *cation Amendments of 1972 (20 U.S.C. 1681 et seq.), the*  
 3 *Secretary of Energy shall annually conduct compliance re-*  
 4 *views of at least 2 recipients of Department of Energy*  
 5 *grants.*

6 **SEC. 2010. HIGH-RISK, HIGH-REWARD RESEARCH.**

7       **(a) DEFINITION OF HIGH-RISK, HIGH-REWARD RE-**  
 8 **SEARCH.**—*In this section, the term “high-risk, high reward*  
 9 *research” means research that—*

10           (1) *has the potential for yielding results with*  
 11 *far-ranging implications;*

12           (2) *is too novel or spans too diverse a range of*  
 13 *disciplines to fare well in the traditional peer review*  
 14 *process; and*

15           (3) *is supportive of the missions of the spon-*  
 16 *soring agency.*

17       **(b) ESTABLISHMENT OF GRANT PROGRAMS.**—

18           (1) **ENERGY GRANT PROGRAM.**—*The Secretary*  
 19 *shall establish a grant program to encourage the con-*  
 20 *duct of high-risk, high-reward research at the Depart-*  
 21 *ment.*

22           (2) **GEOLOGICAL GRANT PROGRAM.**—*The Direc-*  
 23 *tor of the United States Geological Survey shall estab-*  
 24 *lish a grant program to encourage the conduct of*

1 *high-risk, high-reward research at the United States*  
2 *Geological Survey.*

3 **SEC. 2011. DISTINGUISHED SCIENTIST PROGRAM.**

4 (a) *PURPOSE.*—*The purpose of this section is to pro-*  
5 *mote scientific and academic excellence through collabora-*  
6 *tions between institutions of higher education and the Na-*  
7 *tional Laboratories.*

8 (b) *ESTABLISHMENT.*—*The Secretary shall establish a*  
9 *program to support the joint appointment of distinguished*  
10 *scientists by institutions of higher education and National*  
11 *Laboratories.*

12 (c) *QUALIFICATIONS.*—*Successful candidates under*  
13 *this section shall be persons who, by reason of professional*  
14 *background and experience, are able to bring international*  
15 *recognition to the appointing institution of higher edu-*  
16 *cation and National Laboratory in their field of scientific*  
17 *endeavor.*

18 (d) *SELECTION.*—*A distinguished scientist appointed*  
19 *under this section shall be selected through an open, com-*  
20 *petitive process.*

21 (e) *APPOINTMENT.*—

22 (1) *INSTITUTION OF HIGHER EDUCATION.*—*An*  
23 *appointment by an institution of higher education*  
24 *under this section shall be filled within the tenure al-*

1        *lotment of the institution of higher education at a*  
2        *minimum rank of professor.*

3            (2) *NATIONAL LABORATORY.*—*An appointment*  
4        *by a National Laboratory under this section shall be*  
5        *at the rank of the highest grade of distinguished sci-*  
6        *entist or technical staff of the National Laboratory.*

7            (f) *DURATION.*—*An appointment under this section*  
8        *shall be for 6 years, consisting of 2 3-year funding allot-*  
9        *ments.*

10          (g) *USE OF FUNDS.*—*Funds made available under this*  
11        *section may be used for—*

12            (1) *the salary of the distinguished scientist and*  
13        *support staff;*

14            (2) *undergraduate, graduate, and post-doctoral*  
15        *appointments;*

16            (3) *research-related equipment;*

17            (4) *professional travel; and*

18            (5) *such other requirements as the Director deter-*  
19        *mines are necessary to carry out the purpose of the*  
20        *program.*

21          (h) *REVIEW.*—

22            (1) *IN GENERAL.*—*The appointment of a distin-*  
23        *guished scientist under this section shall be reviewed*  
24        *at the end of the first 3-year allotment for the distin-*  
25        *guished scientist through an open peer-review process*

1     *to determine whether the appointment is meeting the*  
2     *purpose of this section under subsection (a).*

3             (2) *FUNDING.—Funding of the appointment of*  
4     *the distinguished scientist for the second 3-year allot-*  
5     *ment shall be determined based on the review con-*  
6     *ducted under paragraph (1).*

7             (i) *COST SHARING.—To be eligible for assistance under*  
8     *this section, an appointing institution of higher education*  
9     *shall pay at least 50 percent of the total costs of the appoint-*  
10    *ment.*

11            (j) *AUTHORIZATION OF APPROPRIATIONS.—There are*  
12    *authorized to be appropriated to carry out this section—*

13                (1) *\$30,000,000 for fiscal year 2008 (to support*  
14     *up to 30 appointments under this section);*

15                (2) *\$60,000,000 for fiscal year 2009 (to support*  
16     *up to 60 such appointments); and*

17                (3) *\$100,000,000 for each of fiscal years 2010*  
18     *and 2011 (to support up to 100 such appointments).*

## 19            ***DIVISION C—EDUCATION***

### 20    ***SEC. 3001. FINDINGS.***

21     *Congress makes the following findings:*

22                (1) *A well-educated population is essential to re-*  
23     *taining America’s competitiveness in the global econ-*  
24     *omy.*

1           (2) *The United States needs to build on and ex-*  
2 *pend the impact of existing programs by taking addi-*  
3 *tional, well-coordinated steps to ensure that all stu-*  
4 *dents are able to obtain the knowledge the students*  
5 *need to obtain postsecondary education and partici-*  
6 *pate successfully in the workforce or the Armed*  
7 *Forces.*

8           (3) *The next steps must be informed by inde-*  
9 *pendent information on the effectiveness of current*  
10 *programs in science, technology, engineering, and*  
11 *mathematics education, and by identification of best*  
12 *practices that can be replicated.*

13           (4) *Teacher preparation and elementary school*  
14 *and secondary school programs and activities must be*  
15 *aligned with the requirements of the Elementary and*  
16 *Secondary Education Act of 1965 (20 U.S.C. 6301 et*  
17 *seq.) and the requirements of the Higher Education*  
18 *Act of 1965 (20 U.S.C. 1001 et seq.).*

19           (5) *The ever increasing knowledge and skill de-*  
20 *mands of the 21st century require that secondary*  
21 *school preparation and requirements be better aligned*  
22 *with the knowledge and skills needed to succeed in*  
23 *postsecondary education and the workforce, and*  
24 *States need better data systems to track educational*

1        *achievement from prekindergarten through baccalaureate degrees.*

3    **SEC. 3002. DEFINITIONS.**

4        (a) *ESEA DEFINITIONS.*—*Unless otherwise specified in this division, the terms used in this division have the meanings given the terms in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).*

8        (b) *OTHER DEFINITIONS.*—*In this division:*

9            (1) *CRITICAL FOREIGN LANGUAGE.*—*The term “critical foreign language” means a foreign language that the Secretary determines, in consultation with the heads of such Federal departments and agencies as the Secretary determines appropriate, is critical to the national security and economic competitiveness of the United States.*

16           (2) *SECRETARY.*—*The term “Secretary” means the Secretary of Education.*

18    **TITLE I—TEACHER ASSISTANCE**

19            **Subtitle A—Teachers for a**  
20            **Competitive Tomorrow**

21    **SEC. 3111. PURPOSE.**

22        *The purpose of this subtitle is—*

23            (1) *to develop and implement programs to provide integrated courses of study in mathematics, science, engineering, or critical foreign languages, and*

1 *teacher education, that lead to a baccalaureate degree*  
 2 *with concurrent teacher certification;*

3 *(2) to develop and implement 2- or 3-year part-*  
 4 *time master's degree programs in mathematics,*  
 5 *science, technology, or critical foreign language edu-*  
 6 *cation for teachers in order to enhance the teachers'*  
 7 *content knowledge and pedagogical skills; and*

8 *(3) to develop programs for professionals in*  
 9 *mathematics, science, or critical foreign language edu-*  
 10 *cation that lead to a master's degree in teaching that*  
 11 *results in teacher certification.*

12 **SEC. 3112. DEFINITIONS.**

13 *In this subtitle:*

14 *(1) CHILDREN FROM LOW-INCOME FAMILIES.—*  
 15 *The term “children from low-income families” means*  
 16 *children described in section 1124(c)(1)(A) of the Ele-*  
 17 *mentary and Secondary Education Act of 1965 (20*  
 18 *U.S.C. 6333(c)(1)(A)).*

19 *(2) ELIGIBLE RECIPIENT.—The term “eligible re-*  
 20 *cipient” means an institution of higher education*  
 21 *that receives grant funds under this subtitle on behalf*  
 22 *of a department of mathematics, engineering, science,*  
 23 *or a critical foreign language, or on behalf of a de-*  
 24 *partment or school with a competency-based degree*  
 25 *program (in mathematics, engineering, science, or a*

1 *critical foreign language) that includes teacher certifi-*  
2 *cation, for use in carrying out activities assisted*  
3 *under this subtitle.*

4 (3) *HIGH-NEED LOCAL EDUCATIONAL AGENCY.—*  
5 *The term “high-need local educational agency” means*  
6 *a local educational agency or educational service*  
7 *agency—*

8 (A)(i) *that serves not fewer than 10,000*  
9 *children from low-income families;*

10 (ii) *for which not less than 20 percent of the*  
11 *children served by the agency are children from*  
12 *low-income families; or*

13 (iii) *with a total of less than 600 students*  
14 *in average daily attendance at the schools that*  
15 *are served by the agency and all of whose schools*  
16 *are designated with a school locale code of 6, 7,*  
17 *or 8, as determined by the Secretary; and*

18 (B)(i) *for which there is a high percentage*  
19 *of teachers providing instruction in academic*  
20 *subject areas or grade levels for which the teach-*  
21 *ers are not highly qualified; or*

22 (ii) *for which there is a high teacher turn-*  
23 *over rate or a high percentage of teachers with*  
24 *emergency, provisional, or temporary certifi-*  
25 *cation or licensure.*

1           (4) *HIGHLY QUALIFIED.*—*The term “highly*  
2 *qualified” has the meaning given such term in section*  
3 *9101 of the Elementary and Secondary Education*  
4 *Act of 1965 (20 U.S.C. 7801) and, with respect to*  
5 *special education teachers, in section 602 of the Indi-*  
6 *viduals with Disabilities Education Act (20 U.S.C.*  
7 *1401).*

8           (5) *PARTNERSHIP.*—*The term “partnership”*  
9 *means a partnership that—*

10           (A) *shall include—*

11                   (i) *an eligible recipient;*

12                   (ii)(I)(aa) *a department within the eli-*  
13 *gible recipient that provides a program of*  
14 *study in mathematics, engineering, science,*  
15 *or a critical foreign language; and*

16                   (bb) *a school or department within the*  
17 *eligible recipient that provides a teacher*  
18 *preparation program, or a 2-year institu-*  
19 *tion of higher education that has a teacher*  
20 *preparation offering or a dual enrollment*  
21 *program with the eligible recipient; or*

22                   (II) *a department or school within the*  
23 *eligible recipient with a competency-based*  
24 *degree program (in mathematics, engineer-*

1           *ing, science, or a critical foreign language)*

2           *that includes teacher certification; and*

3                     *(iii) not less than 1 high-need local*

4                     *educational agency and a public school or a*

5                     *consortium of public schools served by the*

6                     *agency; and*

7                     *(B) may include a nonprofit organization*

8                     *that has the capacity to provide expertise or sup-*

9                     *port to meet the purposes of this subtitle.*

10           (6) *TEACHING SKILLS.*—*The term “teaching*  
11 *skills” means the ability to—*

12                     *(A) increase student achievement;*

13                     *(B) effectively convey and explain academic*  
14 *subject matter;*

15                     *(C) employ strategies that—*

16                             *(i) are based on scientifically based re-*  
17 *search;*

18                             *(ii) are specific to academic subject*  
19 *matter; and*

20                             *(iii) focus on the identification of, and*  
21 *tailoring of academic instruction to, stu-*  
22 *dents’ specific learning needs, particularly*  
23 *children with disabilities, students who are*  
24 *limited English proficient, and students*  
25 *who are gifted and talented;*

1                   (D) conduct ongoing assessment of student  
2                   learning;

3                   (E) effectively manage a classroom; and

4                   (F) communicate and work with parents  
5                   and guardians, and involve parents and guard-  
6                   ians in their children's education.

7 **SEC. 3113. PROGRAMS FOR BACCALAUREATE DEGREES IN**  
8                   **MATHEMATICS, SCIENCE, ENGINEERING, OR**  
9                   **CRITICAL FOREIGN LANGUAGES, WITH CON-**  
10                   **CURRENT TEACHER CERTIFICATION.**

11           (a) *PROGRAM AUTHORIZED.*—From the amounts  
12 made available to carry out this section under section  
13 3116(1) and not reserved under section 3115(d) for a fiscal  
14 year, the Secretary is authorized to award grants, on a  
15 competitive basis, to eligible recipients to enable partner-  
16 ships served by the eligible recipients to develop and imple-  
17 ment programs to provide courses of study in mathematics,  
18 science, engineering, or critical foreign languages that—

19                   (1) are integrated with teacher education; and

20                   (2) lead to a baccalaureate degree with concur-  
21 rent teacher certification.

22           (b) *APPLICATION.*—Each eligible recipient desiring a  
23 grant under this section shall submit an application to the  
24 Secretary at such time and in such manner as the Secretary  
25 may require. Each application shall—

1           (1) *describe the program for which assistance is*  
2           *sought;*

3           (2) *describe how a department of mathematics,*  
4           *science, engineering, or a critical foreign language*  
5           *participating in the partnership will ensure signifi-*  
6           *cant collaboration with a teacher preparation pro-*  
7           *gram in the development of undergraduate degrees in*  
8           *mathematics, science, engineering, or a critical for-*  
9           *ign language, with concurrent teacher certification,*  
10          *including providing student teaching and other clin-*  
11          *ical classroom experiences or how a department or*  
12          *school participating in the partnership with a com-*  
13          *petency-based degree program has ensured, in the de-*  
14          *velopment of a baccalaureate degree program in*  
15          *mathematics, science, engineering, or a critical for-*  
16          *ign language, the provision of concurrent teacher cer-*  
17          *tification, including providing student teaching and*  
18          *other clinical classroom experiences;*

19          (3) *describe the high-quality research, laboratory,*  
20          *or internship experiences, integrated with coursework,*  
21          *that will be provided under the program;*

22          (4) *describe how members of groups that are*  
23          *underrepresented in the teaching of mathematics,*  
24          *science, technology, engineering, or critical foreign*

1 *languages will be encouraged to participate in the*  
2 *program;*

3 *(5) describe how program participants will be*  
4 *encouraged to teach in schools determined by the part-*  
5 *nership to be most in need, and what assistance in*  
6 *finding employment in such schools will be provided;*

7 *(6) describe the ongoing activities and services*  
8 *that will be provided to graduates of the program;*

9 *(7) describe how the activities of the partnership*  
10 *will be coordinated with any activities funded*  
11 *through other Federal grants, and how the partner-*  
12 *ship will continue the activities assisted under the*  
13 *program when the grant period ends;*

14 *(8) describe how the partnership will assess the*  
15 *content knowledge and teaching skills of the program*  
16 *participants; and*

17 *(9) provide any other information the Secretary*  
18 *may reasonably require.*

19 *(c) AUTHORIZED ACTIVITIES.—*

20 *(1) IN GENERAL.—Each eligible recipient receiv-*  
21 *ing a grant under this section shall use the grant*  
22 *funds to enable a partnership to develop and imple-*  
23 *ment a program to provide courses of study in mathe-*  
24 *matics, science, engineering, or a critical foreign lan-*  
25 *guage that—*

1           (A) are integrated with teacher education  
2           programs that promote effective teaching skills;  
3           and

4           (B) lead to a baccalaureate degree in math-  
5           ematics, science, engineering, or a critical for-  
6           eign language with concurrent teacher certifi-  
7           cation.

8           (2) *PROGRAM REQUIREMENTS.*—The program  
9           shall—

10           (A) provide high-quality research, labora-  
11           tory, or internship experiences for program par-  
12           ticipants;

13           (B) provide student teaching or other clin-  
14           ical classroom experiences that—

15                   (i) are integrated with coursework; and

16                   (ii) lead to the participants' ability to  
17           demonstrate effective teaching skills;

18           (C) if implementing a program in which  
19           program participants are prepared to teach  
20           mathematics, science, technology, or engineering  
21           courses, include strategies for improving student  
22           literacy;

23           (D) encourage the participation of individ-  
24           uals who are members of groups that are under-  
25           represented in the teaching of mathematics,

1           *science, technology, engineering, or critical for-*  
2           *ign languages;*

3           *(E) encourage participants to teach in*  
4           *schools determined by the partnership to be most*  
5           *in need, and actively assist the participants in*  
6           *finding employment in such schools;*

7           *(F) offer training in the use of and integra-*  
8           *tion of educational technology;*

9           *(G) collect data regarding and evaluate,*  
10          *using measurable objectives and benchmarks, the*  
11          *extent to which the program succeeded in—*

12           *(i) increasing the percentage of highly*  
13           *qualified mathematics, science, or critical*  
14           *foreign language teachers, including in-*  
15           *creasing the percentage of such teachers*  
16           *teaching in those schools determined by the*  
17           *partnership to be most in need;*

18           *(ii) improving student academic*  
19           *achievement in mathematics, science, and*  
20           *where applicable, technology and engineer-*  
21           *ing;*

22           *(iii) increasing the number of students*  
23           *in secondary schools enrolled in upper level*  
24           *mathematics, science, and, where available,*  
25           *technology and engineering courses; and*

1                   (iv) increasing the numbers of elemen-  
2                   tary school, middle school, and secondary  
3                   school students enrolled in and continuing  
4                   in critical foreign language courses;

5                   (H) collect data on the employment place-  
6                   ment of all graduates of the program, including  
7                   information on how many graduates are teach-  
8                   ing and in what kinds of schools;

9                   (I) provide ongoing activities and services  
10                  to graduates of the program who teach elemen-  
11                  tary school, middle school, or secondary school,  
12                  by—

13                       (i) keeping the graduates informed of  
14                       the latest developments in their respective  
15                       academic fields; and

16                       (ii) supporting the graduates of the  
17                       program who are employed in schools in the  
18                       local educational agency participating in  
19                       the partnership during the initial years of  
20                       teaching through—

21                               (I) induction programs;

22                               (II) promotion of effective teach-  
23                               ing skills; and

24                               (III) providing opportunities for  
25                               regular professional development; and

1                   (J) develop recommendations to improve the  
2                   teacher preparation program participating in  
3                   the partnership.

4           (d) ANNUAL REPORT.—Each eligible recipient receiv-  
5           ing a grant under this section shall collect and report to  
6           the Secretary annually such information as the Secretary  
7           may reasonably require, including—

8                   (1) the number of participants in the program;

9                   (2) information on the academic majors of par-  
10                  ticipating students;

11                  (3) the race, gender, income, and disability sta-  
12                  tus of program participants;

13                  (4) the employment placement of program par-  
14                  ticipants as teachers in schools determined by the  
15                  partnership to be most in need;

16                  (5) the extent to which the program succeeded in  
17                  meeting the objectives and benchmarks described in  
18                  subsection (c)(2)(G); and

19                  (6) the data collected under subparagraphs (G)  
20                  and (H) of subsection (c)(2).

21           (e) TECHNICAL ASSISTANCE.—From the funds made  
22           available under section 3116(1), the Secretary may provide  
23           technical assistance to an eligible recipient developing a  
24           baccalaureate degree program with concurrent teacher cer-  
25           tification, including technical assistance provided through

1 *a grant or contract awarded on a competitive basis to an*  
2 *institution of higher education or a technical assistance cen-*  
3 *ter.*

4 **SEC. 3114. PROGRAMS FOR MASTER'S DEGREES IN MATHE-**  
5 **MATICS, SCIENCE, TECHNOLOGY, OR CRIT-**  
6 **ICAL FOREIGN LANGUAGES EDUCATION.**

7 (a) *PROGRAM AUTHORIZED.*—*From the amounts*  
8 *made available to carry out this section under section*  
9 *3116(2) and not reserved under section 3115(d) for a fiscal*  
10 *year, the Secretary is authorized to award grants, on a*  
11 *competitive basis, to eligible recipients to enable the part-*  
12 *nerships served by the eligible recipients to develop and*  
13 *implement—*

14 (1) *2- or 3-year part-time master's degree pro-*  
15 *grams in mathematics, science, technology, or critical*  
16 *foreign language education for teachers in order to en-*  
17 *hance the teacher's content knowledge and teaching*  
18 *skills; or*

19 (2) *programs for professionals in mathematics,*  
20 *science, engineering, or critical foreign language that*  
21 *lead to a 1 year master's degree in teaching that re-*  
22 *sults in teacher certification.*

23 (b) *APPLICATION.*—*Each eligible recipient desiring a*  
24 *grant under this section shall submit an application to the*

1 *Secretary at such time and in such manner as the Secretary*  
2 *may require. Each application shall describe—*

3           (1) *how a department of mathematics, science,*  
4 *engineering, technology, or a critical foreign language*  
5 *will ensure significant collaboration with a teacher*  
6 *preparation program in the development of the mas-*  
7 *ter's degree programs authorized under subsection (a),*  
8 *or how a department or school with a competency-*  
9 *based degree program has ensured, in the development*  
10 *of a master's degree program, the provision of rig-*  
11 *orous studies in mathematics, science, or a critical*  
12 *foreign language that enhance the teachers' content*  
13 *knowledge and teaching skills;*

14           (2) *the role of the local educational agency in the*  
15 *partnership in developing and administering the pro-*  
16 *gram and how feedback from the local educational*  
17 *agency, school, and participants will be used to im-*  
18 *prove the program;*

19           (3) *how the program will help increase the per-*  
20 *centage of highly qualified mathematics, science, or*  
21 *critical foreign language teachers, including increas-*  
22 *ing the percentage of such teachers teaching in schools*  
23 *determined by the partnership to be most in need;*

24           (4) *how the program will—*

1           (A) *improve student academic achievement*  
2           *in mathematics, science, and, where applicable,*  
3           *technology and engineering and increase the*  
4           *number of students taking upper-level courses in*  
5           *such subjects; or*

6           (B) *increase the numbers of elementary*  
7           *school, middle school, and secondary school stu-*  
8           *dents enrolled and continuing in critical foreign*  
9           *language courses;*

10          (5) *how the program will prepare participants*  
11          *to become more effective mathematics, science, or crit-*  
12          *ical foreign language teachers;*

13          (6) *how the program will prepare participants*  
14          *to assume leadership roles in their schools;*

15          (7) *how teachers (or mathematics, science, or*  
16          *critical language professionals) who are members of*  
17          *groups that are underrepresented in the teaching of*  
18          *mathematics, science, engineering, technology, or crit-*  
19          *ical foreign languages and teachers from schools deter-*  
20          *mined by the partnership to be most in need will be*  
21          *encouraged to apply for and participate in the pro-*  
22          *gram;*

23          (8) *the ongoing activities and services that will*  
24          *be provided to graduates of the program;*

1           (9) *how the partnership will continue the activi-*  
2           *ties assisted under the grant when the grant period*  
3           *ends;*

4           (10) *how the partnership will assess, during the*  
5           *program, the content knowledge and teaching skills of*  
6           *the program participants; and*

7           (11) *methods to ensure applicants to the master's*  
8           *degree program for professionals in mathematics,*  
9           *science, or critical foreign language demonstrate ad-*  
10          *vanced knowledge in the relevant subject.*

11          (c) *AUTHORIZED ACTIVITIES.—Each eligible recipient*  
12          *receiving a grant under this section shall use the grant*  
13          *funds to develop and implement a 2- or 3-year part-time*  
14          *master's degree program in mathematics, science, or critical*  
15          *foreign language education for teachers in order to enhance*  
16          *the teachers' content knowledge and teaching skills, or pro-*  
17          *grams for professionals in mathematics, science, or critical*  
18          *foreign language that lead to a 1-year master's degree in*  
19          *teaching that results in teacher certification. The program*  
20          *shall—*

21                 (1) *promote effective teaching skills so that pro-*  
22                 *gram participants become more effective mathematics,*  
23                 *science, or critical foreign language teachers;*

24                 (2) *prepare teachers to assume leadership roles*  
25                 *in their schools by participating in activities such as*

1 *teacher mentoring, development of curricula that inte-*  
2 *grate state of the art applications of mathematics,*  
3 *science, technology, and engineering into the class-*  
4 *room, working with school administrators in estab-*  
5 *lishing in-service professional development of teachers,*  
6 *and assisting in evaluating data and assessments to*  
7 *improve student academic achievement;*

8 (3) *use high-quality research, laboratory, or in-*  
9 *ternship experiences for program participants that*  
10 *are integrated with coursework;*

11 (4) *provide student teaching or clinical class-*  
12 *room experience;*

13 (5) *if implementing a program in which partici-*  
14 *pants are prepared to teach mathematics or science*  
15 *courses, provide strategies for improving student lit-*  
16 *eracy;*

17 (6) *align the content knowledge in the master's*  
18 *degree program with challenging student academic*  
19 *achievement standards and challenging academic con-*  
20 *tent standards established by the State in which the*  
21 *program is conducted;*

22 (7) *encourage the participation of—*

23 (A) *individuals who are members of groups*  
24 *that are underrepresented in the teaching of*

1           *mathematics, science, engineering, technology, or*  
2           *critical foreign languages;*

3                   *(B) members of the Armed Forces who are*  
4           *transitioning to civilian life; and*

5                   *(C) teachers teaching in schools determined*  
6           *by the partnership to be most in need;*

7           *(8) offer tuition assistance, based on need, as ap-*  
8           *propriate;*

9                   *(9) create opportunities for enhanced and ongo-*  
10          *ing professional development for teachers that im-*  
11          *proves the mathematics and science content knowledge*  
12          *and teaching skills of such teachers; and*

13                  *(10) evaluate and report on the impact of the*  
14          *program, in accordance with subsection (d).*

15          *(d) EVALUATION AND REPORT.—Each eligible recipi-*  
16          *ent receiving a grant under this section shall evaluate,*  
17          *using measurable objectives and benchmarks, and provide*  
18          *an annual report to the Secretary regarding, the extent to*  
19          *which the program assisted under this section succeeded in*  
20          *the following:*

21                  *(1) Increasing the number and percentage of*  
22          *mathematics, science, engineering, technology, or crit-*  
23          *ical foreign language teachers who have a master's de-*  
24          *gree and meet 1 or more of the following require-*  
25          *ments:*

1           (A) *Are teaching in schools determined by*  
2           *the partnership to be most in need, and taught*  
3           *in such schools prior to participation in the pro-*  
4           *gram.*

5           (B) *Are teaching in schools determined by*  
6           *the partnership to be most in need, and did not*  
7           *teach in such schools prior to participation in*  
8           *the program.*

9           (C) *Are members of a group underrep-*  
10          *resented in the teaching of mathematics, science,*  
11          *or a critical foreign language.*

12          (2) *Bringing professionals in mathematics,*  
13          *science, engineering, or critical foreign language into*  
14          *the field of teaching.*

15          (3) *Retaining teachers who participate in the*  
16          *program.*

17 **SEC. 3115. GENERAL PROVISIONS.**

18          (a) *DURATION OF GRANTS.*—*The Secretary shall*  
19          *award each grant under this subtitle for a period of not*  
20          *more than 5 years.*

21          (b) *MATCHING REQUIREMENT.*—*Each eligible recipi-*  
22          *ent that receives a grant under this subtitle shall provide,*  
23          *from non-Federal sources, an amount equal to 50 percent*  
24          *of the amount of the grant (which may be provided in cash*

1 *or in kind) to carry out the activities supported by the*  
2 *grant.*

3       *(c) SUPPLEMENT, NOT SUPPLANT.—Grant funds pro-*  
4 *vided under this subtitle shall be used to supplement, and*  
5 *not supplant, other Federal or State funds.*

6       *(d) EVALUATION.—From amounts made available for*  
7 *any fiscal year under section 3116, the Secretary shall re-*  
8 *serve such sums as may be necessary—*

9             *(1) to provide for the conduct of an annual inde-*  
10 *pendent evaluation, by grant or by contract, of the ac-*  
11 *tivities assisted under this subtitle, which shall in-*  
12 *clude an assessment of the impact of the activities on*  
13 *student academic achievement; and*

14             *(2) to prepare and submit an annual report on*  
15 *the results of the evaluation described in paragraph*  
16 *(1) to the Committee on Health, Education, Labor,*  
17 *and Pensions of the Senate, the Committee on Edu-*  
18 *cation and the Workforce of the House of Representa-*  
19 *tives, and the Committees on Appropriations of the*  
20 *Senate and House of Representatives.*

21 **SEC. 3116. AUTHORIZATION OF APPROPRIATIONS.**

22       *There are authorized to be appropriated to carry out*  
23 *this section \$210,000,000 for fiscal year 2008, and such*  
24 *sums as may be necessary for each of the 3 succeeding fiscal*  
25 *years, of which—*

1           (1) 57.1 percent shall be available to carry out  
2           section 3113 for fiscal year 2008 and each succeeding  
3           fiscal year; and

4           (2) 42.9 percent shall be available to carry out  
5           section 3114 for fiscal year 2008 and each succeeding  
6           fiscal year.

7           **Subtitle B—Advanced Placement**  
8           **and International Baccalaureate**  
9           **Programs**

10          **SEC. 3121. PURPOSE.**

11          *It is the purpose of this subtitle—*

12                 (1) *to raise academic achievement through Ad-*  
13                 *vanced Placement and International Baccalaureate*  
14                 *programs by increasing, by 70,000, over a 4-year pe-*  
15                 *riod beginning in 2008, the number of teachers serv-*  
16                 *ing high-need schools who are qualified to teach Ad-*  
17                 *vanced Placement or International Baccalaureate*  
18                 *courses in mathematics, science, and critical foreign*  
19                 *languages;*

20                 (2) *to increase, to 700,000 per year, the number*  
21                 *of students attending high-need schools who—*

22                         (A) *take and score a 3, 4, or 5 on an Ad-*  
23                         *vanced Placement examination in mathematics,*  
24                         *science, or a critical foreign language adminis-*  
25                         *tered by the College Board; or*

1           (B) achieve a passing score on an examina-  
2           tion administered by the International Bacca-  
3           laureate Organization in such a subject;

4           (3) to increase the availability of, and enroll-  
5           ment in, Advanced Placement or International Bac-  
6           calaureate courses in mathematics, science, and crit-  
7           ical foreign languages, and pre-Advanced Placement  
8           or pre-International Baccalaureate courses in such  
9           subjects, in high-need schools; and

10          (4) to support statewide efforts to increase the  
11          availability of, and enrollment in, Advanced Place-  
12          ment or International Baccalaureate courses in math-  
13          ematics, science, and critical foreign languages, and  
14          pre-Advanced Placement or pre-International Bacca-  
15          laureate courses in such subjects, in high-need schools.

16 **SEC. 3122. DEFINITIONS.**

17        *In this subtitle:*

18           (1) **ADVANCED PLACEMENT OR INTERNATIONAL**  
19           **BACCALAUREATE COURSE.**—*The term “Advanced*  
20           *Placement or International Baccalaureate course”*  
21           *means a course of college-level instruction provided to*  
22           *middle or secondary school students, terminating in*  
23           *an examination administered by the College Board or*  
24           *the International Baccalaureate Organization, or an-*  
25           *other such examination approved by the Secretary, or*

1 *another highly rigorous, evidence-based, postsecondary*  
2 *preparatory program terminating in an examination*  
3 *administered by a nationally recognized educational*  
4 *association.*

5 (2) *ELIGIBLE ENTITY.*—*The term “eligible enti-*  
6 *ty” means—*

7 (A) *a State educational agency;*

8 (B) *a local educational agency; or*

9 (C) *a partnership consisting of—*

10 (i) *a national, regional, or statewide*  
11 *nonprofit organization, with expertise and*  
12 *experience in providing Advanced Place-*  
13 *ment or International Baccalaureate serv-*  
14 *ices; and*

15 (ii) *a State educational agency or local*  
16 *educational agency.*

17 (3) *LOW-INCOME STUDENT.*—*The term “low-in-*  
18 *come student” has the meaning given the term “low-*  
19 *income individual” in section 1707(3) of the Elemen-*  
20 *tary and Secondary Education Act of 1965 (20*  
21 *U.S.C. 6537(3)).*

22 (4) *HIGH CONCENTRATION OF LOW-INCOME STU-*  
23 *DENTS.*—*The term “high concentration of low-income*  
24 *students” has the meaning given the term in section*

1        *1707(2) of the Elementary and Secondary Education*  
2        *Act of 1965 (20 U.S.C. 6537(2)).*

3                (5) *HIGH-NEED LOCAL EDUCATIONAL AGENCY.—*  
4        *The term “high-need local educational agency” means*  
5        *a local educational agency or educational service*  
6        *agency described in 3112(3)(A).*

7                (6) *HIGH-NEED SCHOOL.—The term “high-need*  
8        *school” means a middle school or secondary school—*

9                        (A) *with a pervasive need for Advanced*  
10        *Placement or International Baccalaureate*  
11        *courses in mathematics, science, or critical for-*  
12        *foreign languages, or for additional Advanced*  
13        *Placement or International Baccalaureate*  
14        *courses in such a subject; and*

15                        (B)(i) *with a high concentration of low-in-*  
16        *come students; or*

17                        (ii) *designated with a school locale code of*  
18        *6, 7 or 8, as determined by the Secretary.*

19        **SEC. 3123. ADVANCED PLACEMENT AND INTERNATIONAL**  
20        **BACCALAUREATE PROGRAMS.**

21                (a) *PROGRAM AUTHORIZED.—From the amounts ap-*  
22        *propriated under subsection (l), the Secretary is authorized*  
23        *to award grants, on a competitive basis, to eligible entities*  
24        *to enable the eligible entities to carry out the authorized*  
25        *activities described in subsection (g).*

1       (b) *DURATION OF GRANTS.*—*The Secretary may*  
2 *award grants under this section for a period of not more*  
3 *than 5 years.*

4       (c) *COORDINATION.*—*The Secretary shall coordinate*  
5 *the activities carried out under this section with the activi-*  
6 *ties carried out under section 1705 of the Elementary and*  
7 *Secondary Education Act of 1965 (20 U.S.C. 6535).*

8       (d) *PRIORITY.*—*In awarding grants under this section,*  
9 *the Secretary shall give priority to eligible entities that—*

10           (1) *are part of a statewide strategy for increas-*  
11 *ing the availability of Advanced Placement or Inter-*  
12 *national Baccalaureate courses in mathematics,*  
13 *science, and critical foreign languages, and pre-Ad-*  
14 *vanced Placement or pre-International Baccalaureate*  
15 *courses in such subjects, in high-need schools; and*

16           (2) *make Advanced Placement math, science, and*  
17 *critical foreign language courses available to students*  
18 *who are prepared for such work in earlier grades than*  
19 *traditionally made available.*

20       (e) *EQUITABLE DISTRIBUTION.*—*The Secretary, to the*  
21 *extent practicable, shall—*

22           (1) *ensure an equitable geographic distribution*  
23 *of grants under this section among the States; and*

24           (2) *promote an increase in participation in Ad-*  
25 *vanced Placement or International Baccalaureate*

1 *mathematics, science, and critical foreign language*  
2 *courses and examinations in all States.*

3 *(f) APPLICATION.—*

4 *(1) IN GENERAL.—Each eligible entity desiring a*  
5 *grant under this section shall submit an application*  
6 *to the Secretary at such time, in such manner, and*  
7 *containing such information as the Secretary may*  
8 *reasonably require.*

9 *(2) CONTENTS.—The application shall, at a*  
10 *minimum, include a description of—*

11 *(A) the goals and objectives for the project,*  
12 *including—*

13 *(i) increasing the number of teachers*  
14 *serving high-need schools who are qualified*  
15 *to teach Advanced Placement or Inter-*  
16 *national Baccalaureate courses in mathe-*  
17 *matics, science, or critical foreign lan-*  
18 *guages;*

19 *(ii) increasing the number of qualified*  
20 *teachers serving high-need schools who are*  
21 *teaching Advanced Placement or Inter-*  
22 *national Baccalaureate courses in mathe-*  
23 *matics, science, or critical foreign languages*  
24 *to students in the high-need schools;*

1           (iii) increasing the number of Ad-  
2           vanced Placement or International Bacca-  
3           laureate courses in mathematics, science,  
4           and critical foreign languages that are  
5           available to students attending high-need  
6           schools; and

7           (iv) increasing the number of students  
8           attending a high-need school, particularly  
9           low-income students, who enroll in and  
10          pass—

11                   (I) Advanced Placement or Inter-  
12                   national Baccalaureate courses in  
13                   mathematics, science, or critical for-  
14                   eign languages; and

15                   (II) pre-Advanced Placement or  
16                   pre-International Baccalaureate  
17                   courses in such a subject (where pro-  
18                   vided in accordance with subpara-  
19                   graph (B));

20           (B) how the eligible entity will ensure that  
21           students have access to courses, including pre-  
22           Advanced Placement and pre-International Bac-  
23           calaureate courses, that will prepare the students  
24           to enroll and succeed in Advanced Placement or

1            *International Baccalaureate courses in mathe-*  
2            *matics, science, or critical foreign languages;*

3            *(C) how the eligible entity will provide pro-*  
4            *fessional development for teachers assisted under*  
5            *this section;*

6            *(D) how the eligible entity will ensure that*  
7            *teachers serving high-need schools are qualified*  
8            *to teach Advanced Placement or International*  
9            *Baccalaureate courses in mathematics, science,*  
10           *or critical foreign languages;*

11           *(E) how the eligible entity will provide for*  
12           *the involvement of business and community or-*  
13           *ganizations and other entities, including institu-*  
14           *tions of higher education, in the activities to be*  
15           *assisted; and*

16           *(F) how the eligible entity will use funds re-*  
17           *ceived under this section, including how the eli-*  
18           *gible entity will evaluate the success of its*  
19           *project.*

20           *(g) AUTHORIZED ACTIVITIES.—*

21           *(1) IN GENERAL.—Each eligible entity that re-*  
22           *ceives a grant under this section shall use the grant*  
23           *funds to carry out activities designed to increase—*

24           *(A) the number of qualified teachers serving*  
25           *high-need schools who are teaching Advanced*

1           *Placement or International Baccalaureate*  
2           *courses in mathematics, science, or critical for-*  
3           *foreign languages; and*

4                     *(B) the number of students attending high-*  
5                     *need schools who enroll in, and pass, the exami-*  
6                     *nations for such Advanced Placement or Inter-*  
7                     *national Baccalaureate courses.*

8           (2) *PERMISSIVE ACTIVITIES.*—*The activities de-*  
9           *scribed in paragraph (1) may include—*

10                    *(A) teacher professional development, in*  
11                    *order to expand the pool of teachers in the par-*  
12                    *ticipating State, local educational agency, or*  
13                    *high-need school who are qualified to teach Ad-*  
14                    *vanced Placement or International Bacca-*  
15                    *laureate courses in mathematics, science, or crit-*  
16                    *ical foreign languages;*

17                    *(B) pre-Advanced Placement or pre-Inter-*  
18                    *national Baccalaureate course development and*  
19                    *professional development;*

20                    *(C) coordination and articulation between*  
21                    *grade levels to prepare students to enroll and*  
22                    *succeed in Advanced Placement or International*  
23                    *Baccalaureate courses in mathematics, science,*  
24                    *or critical foreign languages;*

25                    *(D) purchase of instructional materials;*

1           (E) activities to increase the availability of,  
2           and participation in, online Advanced Place-  
3           ment or International Baccalaureate courses in  
4           mathematics, science, and critical foreign lan-  
5           guages;

6           (F) reimbursing low-income students at-  
7           tending high-need schools for part or all of the  
8           cost of Advanced Placement or International  
9           Baccalaureate examination fees;

10          (G) carrying out subsection (j), relating to  
11          collecting and reporting data;

12          (H) in the case of a State educational agen-  
13          cy that receives a grant under this section,  
14          awarding subgrants to local educational agencies  
15          to enable the local educational agencies to carry  
16          out authorized activities described in subpara-  
17          graphs (A) through (G); and

18          (I) providing salary increments or bonuses  
19          to teachers serving high-need schools who—

20               (i) become qualified to teach, and  
21               teach, Advanced Placement or International  
22               Baccalaureate courses in mathematics,  
23               science, or a critical foreign language; or

24               (ii) increase the number of low-income  
25               students, who take Advanced Placement or

1            *International Baccalaureate examinations*  
2            *in mathematics, science, or a critical for-*  
3            *ign language with the goal of successfully*  
4            *passing such examinations.*

5            *(h) MATCHING REQUIREMENT.—*

6            *(1) IN GENERAL.—Subject to paragraph (2),*  
7            *each eligible entity that receives a grant under this*  
8            *section shall provide, toward the cost of the activities*  
9            *assisted under the grant, from non-Federal sources,*  
10           *an amount equal to 200 percent of the amount of the*  
11           *grant, except that an eligible entity that is a high-*  
12           *need local educational agency shall provide an*  
13           *amount equal to not more than 100 percent of the*  
14           *amount of the grant.*

15           *(2) WAIVER.—The Secretary may waive all or*  
16           *part of the matching requirement described in para-*  
17           *graph (1) for any fiscal year for an eligible entity de-*  
18           *scribed in subparagraph (A) or (B) of section*  
19           *3122(2), if the Secretary determines that applying the*  
20           *matching requirement to such eligible entity would re-*  
21           *sult in serious hardship or an inability to carry out*  
22           *the authorized activities described in subsection (g).*

23           *(i) SUPPLEMENT NOT SUPPLANT.—Grant funds pro-*  
24           *vided under this section shall be used to supplement, not*

1 *supplant, other Federal and non-Federal funds available to*  
2 *carry out the activities described in subsection (g).*

3 *(j) COLLECTING AND REPORTING REQUIREMENTS.—*

4 *(1) REPORT.—Each eligible entity receiving a*  
5 *grant under this section shall collect and report to the*  
6 *Secretary annually such data on the results of the*  
7 *grant as the Secretary may reasonably require, in-*  
8 *cluding data regarding—*

9 *(A) the number of students enrolling in Ad-*  
10 *vanced Placement or International Baccalaureate*  
11 *courses in mathematics, science, or a*  
12 *critical foreign language, and pre-Advanced*  
13 *Placement or pre-International Baccalaureate*  
14 *courses in such a subject, by the grade the stu-*  
15 *dent is enrolled in, and the distribution of grades*  
16 *those students receive;*

17 *(B) the number of students taking Advanced*  
18 *Placement or International Baccalaureate ex-*  
19 *aminations in mathematics, science, or a critical*  
20 *foreign language, and the distribution of scores*  
21 *on those examinations by the grade the student*  
22 *is enrolled in at the time of the examination;*

23 *(C) the number of teachers receiving train-*  
24 *ing in teaching Advanced Placement or Inter-*  
25 *national Baccalaureate courses in mathematics,*

1           *science, or a critical foreign language who will*  
2           *be teaching such courses in the next school year;*

3           *(D) the number of teachers becoming quali-*  
4           *fied to teach Advanced Placement or Inter-*  
5           *national Baccalaureate courses in mathematics,*  
6           *science, or a critical foreign language; and*

7           *(E) the number of qualified teachers who*  
8           *are teaching Advanced Placement or Inter-*  
9           *national Baccalaureate courses in mathematics,*  
10          *science, or critical foreign languages to students*  
11          *in a high-need school.*

12          (2) *REPORTING OF DATA.—Each eligible entity*  
13          *receiving a grant under this section shall report data*  
14          *required under paragraph (1)—*

15                 *(A) disaggregated by subject area;*

16                 *(B) in the case of student data,*  
17                 *disaggregated in the same manner as informa-*  
18                 *tion is disaggregated under section*  
19                 *1111(h)(1)(C)(i) of the Elementary and Sec-*  
20                 *ondary Education Act of 1965 (20 U.S.C.*  
21                 *6311(h)(1)(C)(i)); and*

22                 *(C) to the extent feasible, in a manner that*  
23                 *allows comparison of conditions before, during,*  
24                 *and after the project.*

1       (k) *EVALUATION AND REPORT.*—*From the amount*  
2 *made available for any fiscal year under subsection (l), the*  
3 *Secretary shall reserve such sums as may be necessary—*

4           (1) *to conduct an annual independent evalua-*  
5 *tion, by grant or by contract, of the program carried*  
6 *out under this section, which shall include an assess-*  
7 *ment of the impact of the program on student aca-*  
8 *demic achievement; and*

9           (2) *to prepare and submit an annual report on*  
10 *the results of the evaluation described in paragraph*  
11 *(1) to the Committee on Health, Education, Labor,*  
12 *and Pensions of the Senate, the Committee on Edu-*  
13 *cation and the Workforce of the House of Representa-*  
14 *tives, and the Committees on Appropriations of the*  
15 *Senate and House of Representatives.*

16       (l) *AUTHORIZATION OF APPROPRIATIONS.*—*There are*  
17 *authorized to be appropriated to carry out this section*  
18 *\$58,000,000 for fiscal year 2008, and such sums as may*  
19 *be necessary for each of the 3 succeeding fiscal years.*

1 ***Subtitle C—Promising Practices in***  
2 ***Mathematics, Science, Tech-***  
3 ***nology, and Engineering Teach-***  
4 ***ing***

5 ***SEC. 3131. PROMISING PRACTICES.***

6 (a) *PURPOSE.*—*The purpose of this section is to*  
7 *strengthen the skills of mathematics, science, technology,*  
8 *and engineering teachers by identifying promising practices*  
9 *in the teaching of mathematics, science, technology, and en-*  
10 *gineering in elementary and secondary education.*

11 (b) *NATIONAL PANEL ON PROMISING PRACTICES IN*  
12 *TEACHING MATHEMATICS, SCIENCE, TECHNOLOGY, AND*  
13 *ENGINEERING.*—*The Secretary is authorized to contract*  
14 *with the National Academy of Sciences to convene, not later*  
15 *than 1 year after the date of enactment of this Act, a na-*  
16 *tional panel to identify existing promising practices in the*  
17 *teaching of mathematics, science, technology, and engineer-*  
18 *ing in kindergarten through grade 12.*

19 (c) *COMPOSITION OF NATIONAL PANEL.*—

20 (1) *CONSULTATION.*—*The Secretary shall enter*  
21 *into a contract with the National Academy of*  
22 *Sciences to establish a panel to identify existing*  
23 *promising practices in the teaching of mathematics,*  
24 *science, technology, and engineering in elementary*

1 *and secondary education with demonstrated evidence*  
2 *of increasing student academic achievement.*

3 (2) *SELECTION.—The National Academy of*  
4 *Sciences shall ensure that the panel established under*  
5 *paragraph (1) broadly represents scientists, practi-*  
6 *tioners, teachers, principals, and representatives from*  
7 *entities with expertise in education, mathematics, and*  
8 *science. The National Academy of Sciences shall en-*  
9 *sure that the panel includes the following:*

10 (A) *A majority representation of teachers*  
11 *and principals directly involved in teaching*  
12 *mathematics, science, technology, or engineering*  
13 *in kindergarten through grade 12.*

14 (B) *Representation of teachers and prin-*  
15 *cipals from all demographic areas, including*  
16 *urban, suburban, and rural schools.*

17 (C) *Representation of teachers from public*  
18 *and private schools.*

19 (3) *QUALIFICATIONS OF MEMBERS.—The mem-*  
20 *bers of the panel established under paragraph (1)*  
21 *shall be individuals who have substantial knowledge*  
22 *or experience relating to—*

23 (A) *mathematics, science, technology, or en-*  
24 *gineering education programs; or*

1                   (B) *mathematics, science, technology, or en-*  
2                   *gineering curricula content development.*

3           (d) *AUTHORIZED ACTIVITIES OF NATIONAL PANEL.—*

4 *The panel shall—*

5                   (1) *identify promising practices in the teaching*  
6                   *of mathematics, science, technology, and engineering*  
7                   *in elementary and secondary education;*

8                   (2) *identify techniques proven to help teachers*  
9                   *increase their skills and expertise in improving stu-*  
10                   *dent achievement in mathematics, science, technology,*  
11                   *and engineering; and*

12                   (3) *identify areas of need for promising practices*  
13                   *in mathematics, science, technology, and engineering.*

14           (e) *DISSEMINATION.—The Secretary shall disseminate*  
15 *information collected pursuant to this section to the public,*  
16 *State educational agencies, and local educational agencies,*  
17 *and shall publish appropriate and relevant information on*  
18 *the promising practices on the website of the Department*  
19 *in an easy to understand format.*

20           (f) *MATHEMATICS, SCIENCE, TECHNOLOGY, AND ENGI-*  
21 *NEERING “PROMISING PRACTICES”.—*

22                   (1) *RELIABILITY AND MEASUREMENT.—The*  
23                   *promising practices in the teaching of mathematics,*  
24                   *science, technology, and engineering in elementary*

1     *and secondary education collected under this section*  
 2     *shall be—*

3             (A) *reliable, valid, and grounded in sci-*  
 4             *entific theory and research;*

5             (B) *reviewed regularly to assess effective-*  
 6             *ness; and*

7             (C) *reviewed in the context of State aca-*  
 8             *demie assessments and student academic achieve-*  
 9             *ment standards.*

10            (2) *STUDENTS WITH DIVERSE LEARNING*  
 11     *NEEDS.—In identifying promising practices under*  
 12     *this section, the panel established under subsection (c)*  
 13     *shall take into account the needs of students with di-*  
 14     *verse learning needs, particularly for students with*  
 15     *disabilities and students who are limited English pro-*  
 16     *ficient.*

17            (g) *AUTHORIZATION OF APPROPRIATIONS.—There are*  
 18     *authorized to be appropriated to carry out this section such*  
 19     *sums as may be necessary for fiscal year 2008.*

## 20            **TITLE II—MATHEMATICS**

### 21     **SEC. 3201. MATH NOW FOR ELEMENTARY SCHOOL AND MID-** 22            **DLE SCHOOL STUDENTS PROGRAM.**

23            (a) *PURPOSE.—The purpose of this section is to enable*  
 24     *all students to reach or exceed grade-level academic achieve-*

1 *ment standards and to prepare the students to enroll in*  
2 *and pass algebra courses by—*

3           (1) *improving instruction in mathematics for*  
4 *students in kindergarten through grade 9 through the*  
5 *implementation of mathematics programs and the*  
6 *support of comprehensive mathematics initiatives that*  
7 *are research-based and reflect a demonstrated record*  
8 *of effectiveness; and*

9           (2) *providing targeted help to low-income stu-*  
10 *dents who are struggling with mathematics and whose*  
11 *achievement is significantly below grade level.*

12       (b) *DEFINITION OF ELIGIBLE LOCAL EDUCATIONAL*  
13 *AGENCY.—In this section, the term “eligible local edu-*  
14 *cational agency” means a high-need local educational agen-*  
15 *cy (as defined in section 3112(3)) serving 1 or more*  
16 *schools—*

17           (1) *with significant numbers or percentages of*  
18 *students whose mathematics skills are below grade*  
19 *level;*

20           (2) *that are not making adequate yearly progress*  
21 *in mathematics under section 1111(b)(2) of the Ele-*  
22 *mentary and Secondary Education Act of 1965 (20*  
23 *U.S.C. 6311(b)(2)); or*

24           (3) *in which students are receiving instruction*  
25 *in mathematics from teachers who do not have mathe-*

1 *mathematical content knowledge or expertise in the teaching*  
2 *of mathematics.*

3 *(c) PROGRAM AUTHORIZED.—*

4 *(1) IN GENERAL.—From the amounts appro-*  
5 *propriated under subsection (k) for any fiscal year, the*  
6 *Secretary is authorized to award grants, on a com-*  
7 *petitive basis, for not more than 5 years, to State*  
8 *educational agencies to enable the State educational*  
9 *agencies to award grants to eligible local educational*  
10 *agencies to carry out the activities described in sub-*  
11 *section (e).*

12 *(2) PRIORITY.—In awarding grants under this*  
13 *section, the Secretary shall give priority to applica-*  
14 *tions for projects that will implement statewide strat-*  
15 *egies for improving mathematics instruction and*  
16 *raising the mathematics achievement of students, par-*  
17 *ticularly students in grades 4 through 8.*

18 *(d) STATE USES OF FUNDS.—*

19 *(1) IN GENERAL.—Each State educational agen-*  
20 *cy that receives a grant under this section for a fiscal*  
21 *year—*

22 *(A) shall expend not more than a total of 10*  
23 *percent of the grant funds to carry out the ac-*  
24 *tivities described in paragraphs (2) or (3) for the*  
25 *fiscal year; and*

1           (B) shall use not less than 90 percent of the  
2           grant funds to award grants, on a competitive  
3           basis, to eligible local educational agencies to en-  
4           able the eligible local educational agencies to  
5           carry out the activities described in subsection  
6           (e) for the fiscal year.

7           (2) *MANDATORY USES OF FUNDS.*—A State edu-  
8           cational agency shall use the grant funds made avail-  
9           able under paragraph (1)(A) to carry out each of the  
10          following activities:

11           (A) *PLANNING AND ADMINISTRATION.*—

12          *Planning and administration, including—*

13           (i) *evaluating applications from eligi-*  
14           *ble local educational agencies using peer re-*  
15           *view teams described in subsection*  
16           *(f)(1)(D);*

17           (ii) *administering the distribution of*  
18           *grants to eligible local educational agencies;*  
19           *and*

20           (iii) *assessing and evaluating, on a*  
21           *regular basis, eligible local educational*  
22           *agency activities assisted under this section,*  
23           *with respect to whether the activities have*  
24           *been effective in increasing the number of*  
25           *children—*

1                   (I) making progress toward meet-  
2                   ing grade-level mathematics achieve-  
3                   ment; and

4                   (II) meeting or exceeding grade-  
5                   level mathematics achievement.

6                   (B) *REPORTING.*—Annually providing the  
7                   Secretary with a report on the implementation  
8                   of this section as described in subsection (i).

9                   (3) *PERMISSIVE USE OF FUNDS; TECHNICAL AS-*  
10                  *SISTANCE.*—

11                  (A) *IN GENERAL.*—A State educational  
12                  agency may use the grant funds made available  
13                  under paragraph (1)(A) for 1 or more of the fol-  
14                  lowing technical assistance activities that assist  
15                  an eligible local educational agency, upon re-  
16                  quest by the eligible local educational agency, in  
17                  accomplishing the tasks required to design and  
18                  implement a project under this section, including  
19                  assistance in—

20                         (i) implementing mathematics pro-  
21                         grams or comprehensive mathematics ini-  
22                         tiatives that are research-based and reflect a  
23                         demonstrated record of effectiveness;

1                   (ii) evaluating and selecting diagnostic  
2                   and classroom based instructional mathe-  
3                   matics assessments; and

4                   (iii) identifying eligible professional  
5                   development providers to conduct the profes-  
6                   sional development activities described in  
7                   subsection (e)(1)(B).

8                   (B) *GUIDANCE.*—*The technical assistance*  
9                   *described in subparagraph (A) shall be guided by*  
10                  *researchers with expertise in the pedagogy of*  
11                  *mathematics, mathematicians, and mathematics*  
12                  *educators from high-risk, high-achievement*  
13                  *schools and eligible local educational agencies.*

14                  (e) *LOCAL USES OF FUNDS.*—

15                   (1) *MANDATORY USES OF FUNDS.*—*Each eligible*  
16                   *local educational agency receiving a grant under this*  
17                   *section shall use the grant funds to carry out each of*  
18                   *the following activities:*

19                   (A) *To implement mathematics programs or*  
20                   *comprehensive mathematics initiatives—*

21                   (i) *for students in the grades of a par-*  
22                   *ticipating school as identified in the appli-*  
23                   *cation submitted under subsection (f)(2)(A);*  
24                   *and*

1                   (ii) that are research-based and reflect  
2                   a demonstrated record of effectiveness.

3                   (B) To provide professional development  
4                   and instructional leadership activities for teach-  
5                   ers and, if appropriate, for administrators and  
6                   other school staff, on the implementation of com-  
7                   prehensive mathematics initiatives designed—

8                   (i) to improve the achievement of stu-  
9                   dents performing significantly below grade  
10                  level;

11                  (ii) to improve the mathematical con-  
12                  tent knowledge of the teachers, administra-  
13                  tors, and other school staff;

14                  (iii) to increase the use of effective in-  
15                  structional practices; and

16                  (iv) to monitor student progress.

17                  (C) To conduct continuous progress moni-  
18                  toring, which may include the adoption and use  
19                  of assessments that—

20                  (i) measure student progress and iden-  
21                  tify areas in which students need help in  
22                  learning mathematics; and

23                  (ii) reflect mathematics content that is  
24                  consistent with State academic achievement  
25                  standards in mathematics described in sec-

1            *tion 1111(b) of the Elementary and Sec-*  
2            *ondary Education Act of 1965 (20 U.S.C.*  
3            *6311(b)).*

4            (2) *PERMISSIVE USES OF FUNDS.—An eligible*  
5            *local educational agency may use grant funds under*  
6            *this section to—*

7                    (A) *adopt and use mathematics instruc-*  
8                    *tional materials and assessments;*

9                    (B) *implement classroom-based assessments,*  
10                   *including diagnostic or formative assessments;*

11                   (C) *provide remedial coursework and inter-*  
12                   *ventions for students, which may be provided be-*  
13                   *fore or after school;*

14                   (D) *provide small groups with individual-*  
15                   *ized instruction in mathematics;*

16                   (E) *conduct activities designed to improve*  
17                   *the content knowledge and expertise of teachers,*  
18                   *such as the use of a mathematics coach, enrich-*  
19                   *ment activities, and interdisciplinary methods of*  
20                   *mathematics instruction; and*

21                   (F) *collect and report performance data.*

22            (f) *APPLICATIONS.—*

23                   (1) *STATE EDUCATIONAL AGENCY.—Each State*  
24                   *educational agency desiring a grant under this sec-*  
25                   *tion shall submit an application to the Secretary at*

1 *such time and in such manner as the Secretary may*  
2 *require. Each application shall include—*

3 *(A) an assurance that the core mathematics*  
4 *instructional program, supplemental instruc-*  
5 *tional materials, and intervention programs*  
6 *used by the eligible local educational agencies for*  
7 *the project, are research-based and reflect a dem-*  
8 *onstrated record of effectiveness and are aligned*  
9 *with State academic achievement standards;*

10 *(B) an assurance that eligible local edu-*  
11 *cational agencies will meet the requirements de-*  
12 *scribed in paragraph (2);*

13 *(C) an assurance that local applications*  
14 *will be evaluated using a peer review process;*

15 *(D) a description of the qualifications of the*  
16 *peer review teams, which shall consist of—*

17 *(i) researchers with expertise in the*  
18 *pedagogy of mathematics;*

19 *(ii) mathematicians; and*

20 *(iii) mathematics educators serving*  
21 *high-risk, high-achievement schools and eli-*  
22 *gible local educational agencies; and*

23 *(E) an assurance that the State will estab-*  
24 *lish a process to safeguard against conflicts of*  
25 *interest, consistent with subsection (g)(2), for in-*

1            *dividuals providing technical assistance on be-*  
2            *half of the State educational agency or partici-*  
3            *parting in the State peer review process under*  
4            *this title.*

5            (2) *ELIGIBLE LOCAL EDUCATIONAL AGENCY.—*

6            *Each eligible local educational agency desiring a*  
7            *grant under this section shall submit an application*  
8            *to the State educational agency at such time and in*  
9            *such manner as the State educational agency may re-*  
10           *quire. Each application shall include—*

11                    (A) *an assurance that the eligible local edu-*  
12                    *cational agency will provide assistance to 1 or*  
13                    *more schools that are—*

14                            (i) *served by the eligible local edu-*  
15                            *cational agency; and*

16                            (ii) *described in section 3201(b);*

17                    (B) *a description of the grades kindergarten*  
18                    *through grade 9, and of the schools, that will be*  
19                    *served;*

20                    (C) *information, on an aggregate basis, on*  
21                    *each school to be served by the project, including*  
22                    *such demographic, socioeconomic, and mathe-*  
23                    *matics achievement data as the State edu-*  
24                    *cational agency may request;*

1           (D) a description of the core mathematics  
2           instructional program, supplemental instruc-  
3           tional materials, and intervention programs or  
4           strategies that will be used for the project, in-  
5           cluding an assurance that the programs or strat-  
6           egies are research-based and reflect a dem-  
7           onstrated record of effectiveness and are aligned  
8           with State academic achievement standards;

9           (E) a description of the activities that will  
10          be carried out under the grant, including a de-  
11          scription of the professional development that  
12          will be provided to teachers, and, if appropriate,  
13          administrators and other school staff, and a de-  
14          scription of how the activities will support  
15          achievement of the purpose of this section;

16          (F) an assurance that the eligible local edu-  
17          cational agency will report to the State edu-  
18          cational agency all data on student academic  
19          achievement that is necessary for the State edu-  
20          cational agency's report under subsection (i);

21          (G) a description of the eligible entity's  
22          plans for evaluating the impact of professional  
23          development and leadership activities in mathe-  
24          matics on the content knowledge and expertise of

1           *teachers, administrators, or other school staff;*  
2           *and*

3                   *(H) any other information the State edu-*  
4                   *cational agency may reasonably require.*

5       *(g) PROHIBITIONS.—*

6                   *(1) IN GENERAL.—In implementing this section,*  
7                   *the Secretary shall not—*

8                           *(A) endorse, approve, or sanction any math-*  
9                           *ematics curriculum designed for use in any*  
10                           *school; or*

11                           *(B) engage in oversight, technical assist-*  
12                           *ance, or activities that will require the adoption*  
13                           *of a specific mathematics program or instruc-*  
14                           *tional materials by a State, local educational*  
15                           *agency, or school.*

16                   *(2) CONFLICT OF INTEREST.—Any Federal em-*  
17                   *ployee, contractor, or subcontractor involved in the*  
18                   *administration, implementation, or provision of over-*  
19                   *sight or technical assistance duties or activities under*  
20                   *this section shall—*

21                           *(A) disclose to the Secretary any financial*  
22                           *ties to publishers, entities, private individuals,*  
23                           *or organizations that will benefit from funds*  
24                           *provided under this section; and*

1           (B) be prohibited from maintaining signifi-  
2           cant financial interests in areas directly related  
3           to duties or activities under this section, unless  
4           granted a waiver by the Secretary.

5           (3) *REPORTING.*—The Secretary shall report an-  
6           nually to the Committee on Health, Education,  
7           Labor, and Pensions of the Senate and to the Com-  
8           mittee on Education and Labor of the House of Rep-  
9           resentatives on any of the special allowances or waiv-  
10          ers granted under paragraph (2)(B).

11          (4) *RULE OF CONSTRUCTION.*—Nothing in this  
12          title shall be construed to authorize or permit the De-  
13          partment of Education, or a Department of Edu-  
14          cation contractor, to mandate, direct, control, or sug-  
15          gest the selection of a mathematics curriculum, sup-  
16          plemental instructional materials, or program of in-  
17          struction by a State, local educational agency, or  
18          school.

19          (h) *MATCHING REQUIREMENTS.*—

20          (1) *STATE EDUCATIONAL AGENCY.*—A State edu-  
21          cational agency that receives a grant under this sec-  
22          tion shall provide, from non-Federal sources, an  
23          amount equal to 50 percent of the amount of the  
24          grant, in cash or in kind, to carry out the activities  
25          supported by the grant, of which not more than 20

1     *percent of such 50 percent may be provided by local*  
2     *educational agencies within the State.*

3             (2) *WAIVER.—The Secretary may waive all of or*  
4     *a portion of the matching requirement described in*  
5     *paragraph (1) for any fiscal year, if the Secretary de-*  
6     *termines that—*

7                     (A) *the application of the matching require-*  
8     *ment will result in serious hardship for the State*  
9     *educational agency; or*

10                    (B) *providing a waiver best serves the pur-*  
11     *pose of the program assisted under this section.*

12     (i) *PROGRAM PERFORMANCE AND ACCOUNTABILITY.—*

13             (1) *INFORMATION.—Each State educational*  
14     *agency receiving a grant under this section shall col-*  
15     *lect and report to the Secretary annually such infor-*  
16     *mation on the results of the grant as the Secretary*  
17     *may reasonably require, including information on—*

18                     (A) *mathematics achievement data that*  
19     *show the progress of students participating in*  
20     *projects under this section (including, to the ex-*  
21     *tent practicable, comparable data from students*  
22     *not participating in such projects), based pri-*  
23     *marily on the results of State, school district*  
24     *wide, or classroom-based, assessments,*  
25     *including—*

1           (i) *specific identification of those*  
2 *schools and eligible local educational agen-*  
3 *cies that report the largest gains in mathe-*  
4 *matics achievement; and*

5           (ii) *evidence on whether the State edu-*  
6 *cational agency and eligible local edu-*  
7 *cational agencies within the State have—*

8               (I) *significantly increased the*  
9 *number of students achieving at grade*  
10 *level or above in mathematics;*

11               (II) *significantly increased the*  
12 *percentages of students described in*  
13 *section 1111(b)(2)(C)(v)(II) of the Ele-*  
14 *mentary and Secondary Education Act*  
15 *of 1965 (20 U.S.C.*  
16 *6311(b)(2)(C)(v)(II)) who are achiev-*  
17 *ing at grade level or above in mathe-*  
18 *matics;*

19               (III) *significantly increased the*  
20 *number of students making significant*  
21 *progress toward meeting grade-level*  
22 *mathematics achievement standards;*  
23 *and*

24               (IV) *successfully implemented this*  
25 *section;*

1           (B) the percentage of students in the schools  
2 served by the eligible local educational agency  
3 who enroll in algebra courses and the percentage  
4 of such students who pass algebra courses; and

5           (C) the progress made in increasing the  
6 quality and accessibility of professional develop-  
7 ment and leadership activities in mathematics,  
8 especially activities resulting in greater content  
9 knowledge and expertise of teachers, administra-  
10 tors, and other school staff, except that the Sec-  
11 retary shall not require such information until  
12 after the third year of a grant awarded under  
13 this section.

14           (2) *REPORTING AND DISAGGREGATION.*—The in-  
15 formation required under paragraph (1) shall be—

16           (A) reported in a manner that allows for a  
17 comparison of aggregated score differentials of  
18 student academic achievement before (to the ex-  
19 tent feasible) and after implementation of the  
20 project assisted under this section; and

21           (B) disaggregated in the same manner as  
22 information is disaggregated under section  
23 1111(h)(1)(C)(i) of the Elementary and Sec-  
24 ondary Education Act of 1965 (20 U.S.C.  
25 6311(h)(1)(C)(i)).

1           (3) *PRIVACY PROTECTION.*—*The data in the re-*  
2 *port shall be reported in a manner that—*

3                   (A) *protects the privacy of individuals; and*

4                   (B) *complies with the requirements of the*  
5 *Family Educational Rights and Privacy Act of*  
6 *1974 (20 U.S.C. 1232g).*

7 (j) *EVALUATION AND TECHNICAL ASSISTANCE.*—

8           (1) *EVALUATION.*—

9                   (A) *IN GENERAL.*—*The Secretary shall con-*  
10 *duct an annual independent evaluation, by*  
11 *grant or by contract, of the program assisted*  
12 *under this section, which shall include an assess-*  
13 *ment of the impact of the program on student*  
14 *academic achievement and teacher performance,*  
15 *and may use funds available to carry out this*  
16 *section to conduct the evaluation.*

17                   (B) *REPORT.*—*The Secretary shall annually*  
18 *submit, to the Committee on Health, Education,*  
19 *Labor, and Pensions of the Senate, the Com-*  
20 *mittee on Education and the Workforce of the*  
21 *House of Representatives, and the Committees on*  
22 *Appropriations of the Senate and House of Rep-*  
23 *resentatives, a report on the results of the evalua-*  
24 *tion.*

1           (2) *TECHNICAL ASSISTANCE.*—*The Secretary*  
2           *may use funds made available under paragraph (3)*  
3           *to provide technical assistance to prospective appli-*  
4           *cants and to eligible local educational agencies receiv-*  
5           *ing a grant under this section.*

6           (3) *RESERVATION OF FUNDS.*—*The Secretary*  
7           *may reserve not more than 2.5 percent of funds ap-*  
8           *propriated under subsection (k) for a fiscal year to*  
9           *carry out this subsection.*

10          (k) *AUTHORIZATION OF APPROPRIATIONS.*—*There are*  
11          *authorized to be appropriated to carry out this section*  
12          *\$146,700,000 for fiscal year 2008, and such sums as may*  
13          *be necessary for each of the 3 succeeding fiscal years.*

14          **SEC. 3202. SUMMER TERM EDUCATION PROGRAMS.**

15          (a) *PURPOSE.*—*The purpose of this section is to create*  
16          *opportunities for summer learning by providing students*  
17          *with access to summer learning in mathematics, technology,*  
18          *and problem-solving to ensure that students do not experi-*  
19          *ence learning losses over the summer and to remedy, rein-*  
20          *force, and accelerate the learning of mathematics and prob-*  
21          *lem-solving.*

22          (b) *DEFINITIONS.*—*In this section:*

23                  (1) *EDUCATIONAL SERVICE AGENCY.*—*The term*  
24                  *“educational service agency” has the meaning given*

1 *the term in section 9101 of the Elementary and Sec-*  
2 *ondary Education Act of 1965 (20 U.S.C. 7801).*

3 (2) *ELIGIBLE ENTITY.*—*The term “eligible enti-*  
4 *ty” means an entity that—*

5 (A) *desires to participate in a summer*  
6 *learning grant program under this section by*  
7 *providing summer learning opportunities de-*  
8 *scribed in subsection (d)(4)(A)(ii) to eligible stu-*  
9 *dents; and*

10 (B) *is—*

11 (i) *a high-need local educational agen-*  
12 *cy; or*

13 (ii) *a consortium consisting of a high-*  
14 *need local educational agency and 1 or*  
15 *more of the following entities:*

16 (I) *Another local educational*  
17 *agency;*

18 (II) *A community-based youth de-*  
19 *velopment organization with a dem-*  
20 *onstrated record of effectiveness in*  
21 *helping students learn;*

22 (III) *An institution of higher edu-*  
23 *cation;*

24 (IV) *An educational service agen-*  
25 *cy; or*

1                   (V) *A for-profit educational pro-*  
2                   *vider, nonprofit organization, science*  
3                   *center, museum, or summer enrichment*  
4                   *camp, that has been approved by the*  
5                   *State educational agency to provide the*  
6                   *summer learning opportunity described*  
7                   *in subsection (d)(4)(A)(ii).*

8                   (3) *ELIGIBLE STUDENT.*—*The term “eligible stu-*  
9                   *dent” means a student who—*

10                   (A) *is eligible for a free lunch under the*  
11                   *Richard B. Russell National School Lunch Act*  
12                   *(42 U.S.C. 1751 et seq.); and*

13                   (B) *is served by a local educational agency*  
14                   *identified by the State educational agency in the*  
15                   *application described in subsection (c)(2).*

16                   (4) *INSTITUTION OF HIGHER EDUCATION.*—*The*  
17                   *term “institution of higher education” has the mean-*  
18                   *ing given the term in section 101(a) of the Higher*  
19                   *Education Act of 1965 (20 U.S.C. 1001(a)).*

20                   (5) *LOCAL EDUCATIONAL AGENCY.*—*The term*  
21                   *“local educational agency” has the meaning given the*  
22                   *term in section 9101 of the Elementary and Sec-*  
23                   *ondary Education Act of 1965 (20 U.S.C. 7801).*

24                   (6) *HIGH-NEED LOCAL EDUCATIONAL AGEN-*  
25                   *CY.*—*The term high-need local educational agency*

1 *means a local educational agency (as defined in sec-*  
2 *tion 9101 of the Elementary and Secondary Edu-*  
3 *cation Act of 1965)—*

4 *(A) that serves not less than 10,000 children*  
5 *from low-income families;*

6 *(B) for which not less than 20 percent of the*  
7 *children served by the agency are children from*  
8 *low-income families; or*

9 *(C) with a total of not less than 600 stu-*  
10 *dents in average daily attendance at the schools*  
11 *that are served by the agency, and all of whose*  
12 *schools are designated with a school locale code*  
13 *of 6, 7, or 8 as determined by the Secretary of*  
14 *Education.*

15 *(7) SECRETARY.—The term “Secretary” means*  
16 *the Secretary of Education.*

17 *(8) STATE.—The term “State” means each of the*  
18 *several States of the United States, the District of Co-*  
19 *lumbia, the Commonwealth of Puerto Rico, Guam,*  
20 *American Samoa, the United States Virgin Islands,*  
21 *the Commonwealth of the Northern Mariana Islands,*  
22 *the Republic of the Marshall Islands, the Federated*  
23 *States of Micronesia, and the Republic of Palau.*

24 *(9) STATE EDUCATIONAL AGENCY.—The term*  
25 *“State educational agency” has the meaning given the*

1 *term in section 9101 of the Elementary and Sec-*  
2 *ondary Education Act of 1965 (20 U.S.C. 7801).*

3 *(c) DEMONSTRATION GRANT PROGRAM.—*

4 *(1) PROGRAM AUTHORIZED.—*

5 *(A) IN GENERAL.—From the funds appro-*  
6 *priated under subsection (f) for a fiscal year, the*  
7 *Secretary shall carry out a demonstration grant*  
8 *program in which the Secretary awards grants,*  
9 *on a competitive basis, to State educational*  
10 *agencies to enable the State educational agencies*  
11 *to pay the Federal share of summer learning*  
12 *grants for eligible students.*

13 *(B) NUMBER OF GRANTS.—For each fiscal*  
14 *year, the Secretary shall award not more than 5*  
15 *grants under this section.*

16 *(2) APPLICATION.—A State educational agency*  
17 *that desires to receive a grant under this section shall*  
18 *submit an application to the Secretary at such time,*  
19 *in such manner, and accompanied by such informa-*  
20 *tion as the Secretary may require. Such application*  
21 *shall identify the areas in the State where the summer*  
22 *learning grant program will be offered and the local*  
23 *educational agencies that serve such areas.*

24 *(3) AWARD BASIS.—*

1           (A) *SPECIAL CONSIDERATION.*—*In award-*  
2           *ing grants under this section, the Secretary shall*  
3           *give special consideration to a State educational*  
4           *agency that agrees, to the extent possible, to enter*  
5           *into agreements with eligible entities that are*  
6           *consortia described in subsection (b)(2)(B)(iii)*  
7           *and that proposes to target services to children*  
8           *in grades K–8.*

9           (B) *GEOGRAPHIC DISTRIBUTION.*—*In*  
10          *awarding grants under this section, the Sec-*  
11          *retary shall take into consideration an equitable*  
12          *geographic distribution of the grants.*

13       (d) *SUMMER LEARNING GRANTS.*—

14           (1) *USE OF GRANTS FOR SUMMER LEARNING*  
15       *GRANTS.*—

16           (A) *IN GENERAL.*—*Each State educational*  
17           *agency that receives a grant under subsection (c)*  
18           *for a fiscal year shall use the grant funds to pro-*  
19           *vide summer learning grants for the fiscal year*  
20           *to eligible students in the State who desire to at-*  
21           *tend a summer learning opportunity offered by*  
22           *an eligible entity that enters into an agreement*  
23           *with the State educational agency under para-*  
24           *graph (4)(A).*

1           (B) *AMOUNT; FEDERAL AND NON-FEDERAL*  
2           *SHARES.—*

3           (i) *AMOUNT.—The amount of a sum-*  
4           *mer learning grant provided under this sec-*  
5           *tion shall be—*

6                       (I) *for each of the fiscal years*  
7                       *2008 through 2011, \$1,600; and*

8                       (II) *for fiscal year 2012, \$1,800.*

9           (ii) *FEDERAL SHARE.—The Federal*  
10           *share of each summer learning grant shall*  
11           *be not more than 50 percent of the amount*  
12           *of the summer learning grant determined*  
13           *under clause (i).*

14           (iii) *NON-FEDERAL SHARE.—The non-*  
15           *Federal share of each summer learning*  
16           *grant shall be not less than 50 percent of*  
17           *the amount of the summer learning grant*  
18           *determined under clause (i), and shall be*  
19           *provided from non-Federal sources.*

20           (2) *DESIGNATION OF SUMMER SCHOLARS.—Eli-*  
21           *gible students who receive summer learning grants*  
22           *under this section shall be known as “summer schol-*  
23           *ars”.*

24           (3) *SELECTION OF SUMMER LEARNING OPPOR-*  
25           *TUNITY.—*

1           (A) *DISSEMINATION OF INFORMATION.*—A  
2           State educational agency that receives a grant  
3           under subsection (c) shall disseminate informa-  
4           tion about summer learning opportunities and  
5           summer learning grants to the families of eligible  
6           students in the State.

7           (B) *APPLICATION.*—The parents of an eligi-  
8           ble student who are interested in having their  
9           child participate in a summer learning oppor-  
10          tunity and receive a summer learning grant  
11          shall submit an application to the State edu-  
12          cational agency that includes a ranked list of  
13          preferred summer learning opportunities.

14          (C) *PROCESS.*—A State educational agency  
15          that receives an application under subparagraph  
16          (B) shall—

- 17               (i) process such application;
- 18               (ii) determine whether the eligible stu-  
19               dent shall receive a summer learning grant;
- 20               (iii) coordinate the assignment of eligi-  
21               ble students receiving summer learning  
22               grants with summer learning opportunities;  
23               and
- 24               (iv) if demand for a summer learning  
25               opportunity exceeds capacity, the State edu-

1            *ational agency shall prioritize applications*  
2            *to low-achieving eligible students.*

3            *(D) FLEXIBILITY.—A State educational*  
4            *agency may assign a summer scholar to a sum-*  
5            *mer learning opportunity program that is of-*  
6            *fered in an area served by a local educational*  
7            *agency that is not the local educational agency*  
8            *serving the area where such scholar resides.*

9            *(E) REQUIREMENT OF ACCEPTANCE.—An*  
10           *eligible entity shall accept, enroll, and provide*  
11           *the summer learning opportunity of such entity*  
12           *to, any summer scholar assigned to such summer*  
13           *learning opportunity by a State educational*  
14           *agency pursuant to this subsection.*

15           *(4) AGREEMENT WITH ELIGIBLE ENTITY.—*

16           *(A) IN GENERAL.—A State educational*  
17           *agency shall enter into an agreement with one or*  
18           *more eligible entities offering a summer learning*  
19           *opportunity, under which—*

20                    *(i) the State educational agency shall*  
21                    *agree to make payments to the eligible enti-*  
22                    *ty, in accordance with subparagraph (B),*  
23                    *for a summer scholar; and*

1           (ii) the eligible entity shall agree to  
2           provide the summer scholar with a summer  
3           learning opportunity that—

4                   (I) provides a total of not less  
5                   than the equivalent of 30 full days of  
6                   instruction (or not less than the equiv-  
7                   alent of 25 full days of instruction, if  
8                   the equivalent of an additional 5 days  
9                   is devoted to field trips or other enrich-  
10                  ment opportunities) to the summer  
11                  scholar;

12                  (II) employs small-group, re-  
13                  search-based educational programs,  
14                  materials, curricula, and practices;

15                  (III) provides a curriculum  
16                  that—

17                          (aa) emphasizes mathe-  
18                          matics, technology, engineering,  
19                          and problem-solving through expe-  
20                          riential learning opportunities;

21                          (bb) is primarily designed to  
22                          increase the numeracy and prob-  
23                          lem-solving skills of the summer  
24                          scholar; and

1                   (cc) is aligned with State  
2                   academic content standards and  
3                   goals of the local educational  
4                   agency serving the summer scholar;  
5

6                   (IV) measures student progress to  
7                   determine the gains made by summer  
8                   scholars in the summer learning opportunity, and disaggregates the results of  
9                   such progress for summer scholars by  
10                  race and ethnicity, economic status,  
11                  limited English proficiency status, and  
12                  disability status, in order to determine  
13                  the opportunity's impact on each sub-  
14                  group of summer scholars;  
15

16                  (V) collects daily attendance data  
17                  on each summer scholar;

18                  (VI) provides professional development opportunities for teachers to improve their practice in teaching numeracy, and in integrating problem-solving techniques into the curriculum;  
19  
20                  and  
21  
22

23  
24                  (VII) meets all applicable Federal,  
25                  State, and local civil rights laws.

1                   (B) *AMOUNT OF PAYMENT.*—

2                   (i) *IN GENERAL.*—*Except as provided*  
3                   *in clause (ii), a State educational agency*  
4                   *shall make a payment to an eligible entity*  
5                   *for a summer scholar in the amount deter-*  
6                   *mined under paragraph (1)(B)(i).*

7                   (ii) *ADJUSTMENT.*—*In the case in*  
8                   *which a summer scholar does not attend the*  
9                   *full summer learning opportunity, the State*  
10                   *educational agency shall reduce the amount*  
11                   *provided to the eligible entity pursuant to*  
12                   *clause (i) by a percentage that is equal to*  
13                   *the percentage of the summer learning op-*  
14                   *portunity not attended by such scholar.*

15                   (5) *ADMINISTRATIVE COSTS.*—*A State edu-*  
16                   *cational agency or eligible entity receiving funding*  
17                   *under this section may use not more than 5 percent*  
18                   *of such funding for administrative costs associated*  
19                   *with carrying out this section.*

20                   (e) *EVALUATIONS; REPORT; WEBSITE.*—

21                   (1) *EVALUATION AND ASSESSMENT.*—*For each*  
22                   *year that an eligible entity enters into an agreement*  
23                   *under subsection (d)(4), the eligible entity shall pre-*  
24                   *pare and submit to the Secretary a report on the ac-*

1 *tivities and outcomes of each summer learning oppor-*  
2 *tunity that enrolled a summer scholar, including—*

3 *(A) information on the design of the sum-*  
4 *mer learning opportunity;*

5 *(B) the alignment of the summer learning*  
6 *opportunity with State standards; and*

7 *(C) data from assessments of student mathe-*  
8 *matics and problem-solving skills for the summer*  
9 *scholars and on the attendance of the scholars,*  
10 *disaggregated by the subgroups described in sub-*  
11 *section (d)(4)(A)(ii)(IV).*

12 *(2) REPORT.—For each year funds are appro-*  
13 *priated under subsection (f) for this section, the Sec-*  
14 *retary shall prepare and submit a report to the*  
15 *HELP Committee of the Senate and the Education*  
16 *and Labor Committee of the House on the summer*  
17 *learning grant programs, including the effectiveness of*  
18 *the summer learning opportunities in improving stu-*  
19 *dent achievement and learning.*

20 *(3) SUMMER LEARNING GRANTS WEBSITE.—The*  
21 *Secretary shall make accessible, on the Department of*  
22 *Education website, information for parents and*  
23 *school personnel on successful programs and cur-*  
24 *ricula, and best practices, for summer learning oppor-*  
25 *tunities.*

1       (f) *AUTHORIZATION OF APPROPRIATIONS.*—*There are*  
2 *authorized to be appropriated to carry out this section such*  
3 *sums as may be necessary for fiscal year 2008 through fiscal*  
4 *year 2012.*

5 **SEC. 3203. MATH SKILLS FOR SECONDARY SCHOOL STU-**  
6 **DENTS.**

7       (a) *The purposes of this section are—*

8           (1) *to provide assistance to State educational*  
9 *agencies and local educational agencies in imple-*  
10 *menting effective research-based mathematics pro-*  
11 *grams for students in secondary schools, including*  
12 *students with disabilities and students with limited*  
13 *English proficiency;*

14           (2) *to improve instruction in mathematics for*  
15 *students in secondary school through the implementa-*  
16 *tion of mathematics programs and the support of*  
17 *comprehensive mathematics initiatives that are based*  
18 *on the best available evidence of effectiveness;*

19           (3) *to provide targeted help to low-income stu-*  
20 *dents who are struggling with mathematics and whose*  
21 *achievement is significantly below grade level; and*

22           (4) *to provide in-service training for mathe-*  
23 *matics coaches who can assist secondary school teach-*  
24 *ers to utilize research-based mathematics instruction*  
25 *to develop and improve students' mathematical abili-*

1 *ties and knowledge, and assist teachers in assessing*  
2 *and improving student academic achievement.*

3 *(b) DEFINITIONS.—In this section:*

4 *(1) ELIGIBLE LOCAL EDUCATIONAL AGENCY.—*  
5 *The term “eligible local educational agency” means a*  
6 *local educational agency that is eligible to receive*  
7 *funds, and that is receiving funds, under part A of*  
8 *title I of the Elementary and Secondary Education*  
9 *Act of 1965 (20 U.S.C. 6311 et seq.).*

10 *(2) MATHEMATICS COACH.—The term “mathe-*  
11 *matics coach” means a certified or licensed teacher,*  
12 *with a demonstrated effectiveness in teaching mathe-*  
13 *matics to students with specialized needs in mathe-*  
14 *matics and improving student academic achievement*  
15 *in mathematics, a command of mathematical content*  
16 *knowledge, and the ability to work with classroom*  
17 *teachers to improve the teachers’ instructional tech-*  
18 *niques to support mathematics improvement, who*  
19 *works on site at a school—*

20 *(A) to train teachers to better assess student*  
21 *learning in mathematics;*

22 *(B) to train teachers to assess students’*  
23 *mathematics skills and identify students who*  
24 *need remediation; and*

1           (C) to provide or assess remedial mathe-  
2           matics instruction, including for—

3                   (i) students in after-school and summer  
4                   school programs;

5                   (ii) students requiring additional in-  
6                   struction;

7                   (iii) students with disabilities; and

8                   (iv) students with limited English pro-  
9                   ficiency.

10           (3) *SECONDARY SCHOOL.*—The term “secondary  
11           school” means a school that provides secondary edu-  
12           cation, as determined under State law.

13           (4) *SECRETARY.*—The term “Secretary” means  
14           the Secretary of Education.

15           (c) *AUTHORIZATION OF APPROPRIATIONS.*—There are  
16           authorized to be appropriated to carry out this section such  
17           sums as be necessary for fiscal year 2008 and each of the  
18           3 succeeding fiscal years.

19           (d) *GRANTS AUTHORIZED.*—

20                   (1) *IN GENERAL.*—From funds appropriated  
21                   under subsection (c) for a fiscal year, the Secretary  
22                   shall establish a program, in accordance with the re-  
23                   quirements of this section, that will provide grants on  
24                   a competitive basis to State educational agencies to  
25                   award grants and subgrants to eligible local edu-

1        *cational agencies for the purpose of establishing math-*  
2        *ematics programs to improve the overall mathematics*  
3        *performance of secondary school students in the State.*

4                (2) *LENGTH OF GRANT.*—*A grant to a State edu-*  
5        *cational agency under this section shall be awarded*  
6        *for a period of 4 years.*

7                (e) *RESERVATION OF FUNDS BY THE SECRETARY.*—  
8        *From amounts appropriated under subsection (c) for a fis-*  
9        *cal year, the Secretary may reserve—*

10                (1) *not more than 3 percent of such amounts to*  
11        *fund national activities in support of the programs*  
12        *assisted under this section, such as research and dis-*  
13        *semination of best practices, except that the Secretary*  
14        *may not use the reserved funds to award grants di-*  
15        *rectly to local educational agencies; and*

16                (2) *not more than 1/2 of 1 percent of such*  
17        *amounts for the Bureau of Indian Education of the*  
18        *Department of the Interior to carry out the services*  
19        *and activities described in subsection (l)(3) for Indian*  
20        *children.*

21                (f) *GRANT FORMULAS.*—

22                (1) *COMPETITIVE GRANTS TO STATE EDU-*  
23        *CATIONAL AGENCIES.*—*From amounts appropriated*  
24        *under subsection (c) and not reserved under sub-*  
25        *section (e), the Secretary shall award grants, on a*

1 *competitive basis, to State educational agencies to en-*  
2 *able the State educational agencies to provide sub-*  
3 *grants to eligible local educational agencies to estab-*  
4 *lish mathematics programs for the purpose of improv-*  
5 *ing overall mathematics performance among students*  
6 *in secondary school in the State.*

7 (2) *MINIMUM GRANT.*—*The Secretary shall en-*  
8 *sure that the minimum grant made to any state edu-*  
9 *cational agency under this section shall be not less*  
10 *than \$500,000.*

11 (g) *APPLICATIONS.*—

12 (1) *IN GENERAL.*—*In order to receive a grant*  
13 *under this section, a State educational agency shall*  
14 *submit an application to the Secretary at such time,*  
15 *in such manner, and accompanied by such informa-*  
16 *tion as the Secretary may require. Each such appli-*  
17 *cation shall meet the following conditions:*

18 (A) *A State educational agency shall not*  
19 *include the application for assistance under this*  
20 *section in a consolidated application submitted*  
21 *under section 9302 of the Elementary and Sec-*  
22 *ondary Education Act of 1965 (20 U.S.C. 7842).*

23 (B) *The State educational agency's applica-*  
24 *tion shall include assurances that such applica-*  
25 *tion and any technical assistance provided by*

1           *the State will be guided by a peer review team,*  
2           *which shall consist of—*

3                     *(i) researchers with expertise in the*  
4                     *pedagogy of mathematics;*

5                     *(ii) mathematicians; and*

6                     *(iii) mathematics educators serving*  
7                     *high-risk, high-achievement schools and eli-*  
8                     *gible local educational agencies.*

9           *(C) The State educational agency will par-*  
10           *ticipate, if requested, in any evaluation of the*  
11           *State educational agency's program under this*  
12           *section.*

13           *(D) The State educational agency's applica-*  
14           *tion shall include a program plan that contains*  
15           *a description of the following:*

16                     *(i) How the State educational agency*  
17                     *will assist eligible local educational agencies*  
18                     *in implementing subgrants, including pro-*  
19                     *viding ongoing professional development for*  
20                     *mathematics coaches, teachers, paraprofes-*  
21                     *sionals, and administrators.*

22                     *(ii) How the State educational agency*  
23                     *will help eligible local educational agencies*  
24                     *identify high-quality screening, diagnostic,*

1                    *and classroom-based instructional mathe-*  
2                    *matics assessments.*

3                    *(iii) How the State educational agency*  
4                    *will help eligible local educational agencies*  
5                    *identify high-quality research-based mathe-*  
6                    *matics materials and programs.*

7                    *(iv) How the State educational agency*  
8                    *will help eligible local educational agencies*  
9                    *identify appropriate and effective materials,*  
10                   *programs, and assessments for students with*  
11                   *disabilities and students with limited*  
12                   *English proficiency.*

13                   *(v) How the State educational agency*  
14                   *will ensure that professional development*  
15                   *funded under this section—*

16                   *(I) is based on mathematics re-*  
17                   *search;*

18                   *(II) will effectively improve in-*  
19                   *structional practices for mathematics*  
20                   *for secondary school students;*

21                   *(III) will improve student aca-*  
22                   *demic achievement in mathematics;*  
23                   *and*

24                   *(IV) is coordinated with profes-*  
25                   *sional development activities funded*

1                   *through other programs, including sec-*  
2                   *tion 2113 of the Elementary and Sec-*  
3                   *ondary Education Act of 1965 (20*  
4                   *U.S.C. 6613).*

5                   *(vi) How funded activities will help*  
6                   *teachers and other instructional staff to im-*  
7                   *plement research-based components of math-*  
8                   *ematics instruction and improve student*  
9                   *academic achievement.*

10                  *(vii) The subgrant process the State*  
11                  *educational agency will use to ensure that*  
12                  *eligible local educational agencies receiving*  
13                  *subgrants implement programs and prac-*  
14                  *tices based on mathematics research.*

15                  *(viii) How the State educational agen-*  
16                  *cy will build on and promote coordination*  
17                  *among mathematics programs in the State*  
18                  *to increase overall effectiveness in improv-*  
19                  *ing mathematics instruction and student*  
20                  *academic achievement, including for stu-*  
21                  *dents with disabilities and students with*  
22                  *limited English proficiency.*

23                  *(ix) How the State educational agency*  
24                  *will regularly assess and evaluate the effec-*

1                    *tiveness of the eligible local educational*  
2                    *agency activities funded under this section.*

3            *(h) STATE USE OF FUNDS.—Each State educational*  
4 *agency receiving a grant under this section shall—*

5                    *(1) establish a peer review team comprised of re-*  
6                    *searchers with expertise in the pedagogy of mathe-*  
7                    *matics, mathematicians, and mathematics educators*  
8                    *from high-risk, high-achievement schools, to provide*  
9                    *guidance to eligible local educational agencies in se-*  
10                   *lecting or developing and implementing appropriate,*  
11                   *research-based mathematics programs for secondary*  
12                   *school students;*

13                   *(2) use 80 percent of the grant funds received*  
14                   *under this section for a fiscal year to fund high-qual-*  
15                   *ity applications for subgrants to eligible local edu-*  
16                   *cational agencies having applications approved under*  
17                   *subsection (l); and*

18                   *(3) use 20 percent of the grant funds received*  
19                   *under this section—*

20                            *(A) to carry out State-level activities de-*  
21                            *scribed in the application submitted under sub-*  
22                            *section (g);*

23                            *(B) to provide—*

24                                    *(i) technical assistance to eligible local*  
25                                    *educational agencies; and*

1                   (ii) *high-quality professional develop-*  
2                   *ment to teachers and mathematics coaches*  
3                   *in the State;*

4                   (C) *to oversee and evaluate subgrant serv-*  
5                   *ices and activities undertaken by the eligible*  
6                   *local educational agencies as described in sub-*  
7                   *section (l)(3); and*

8                   (D) *for administrative costs, of which not*  
9                   *more than 5 percent of the grant funds may be*  
10                  *used for planning, administration, and report-*  
11                  *ing.*

12               (i) *NOTICE TO ELIGIBLE LOCAL EDUCATIONAL AGEN-*  
13               *CIES.—Each State educational agency receiving a grant*  
14               *under this section shall provide notice to all eligible local*  
15               *educational agencies in the State about the availability of*  
16               *subgrants under this section.*

17               (j) *PROHIBITIONS.—*

18                   (1) *IN GENERAL.—In implementing this section,*  
19                   *the Secretary shall not—*

20                   (A) *endorse, approve, or sanction any math-*  
21                   *ematics curriculum designed for use in any*  
22                   *school; or*

23                   (B) *engage in oversight, technical assist-*  
24                   *ance, or activities that will require the adoption*  
25                   *of a specific mathematics program or instruc-*

1           *tional materials by a State, local educational*  
2           *agency, or school.*

3           (2) *CONFLICT OF INTEREST.*—*Any federal em-*  
4           *ployee, contractor, or subcontractor involved in the*  
5           *administration, implementation, or provision of over-*  
6           *sight or technical assistance duties or activities under*  
7           *this section shall—*

8                     (A) *disclose to the Secretary any financial*  
9                     *ties to publishers, entities, private individuals,*  
10                    *or organizations that will benefit from funds*  
11                    *provided under this section; and*

12                   (B) *be prohibited from maintaining signifi-*  
13                    *cant financial interests in areas directly related*  
14                    *to duties or activities under this section, unless*  
15                    *granted a waiver by the Secretary.*

16           (3) *REPORTING.*—*The Secretary shall report an-*  
17           *nually to the Committee on Health, Education,*  
18           *Labor, and Pensions of the Senate, and the Com-*  
19           *mittee on Education and Labor of the House of Rep-*  
20           *resentatives, on each of the waivers granted under*  
21           *paragraph (2)(B).*

22           (4) *RULE OF CONSTRUCTION.*—*Nothing in this*  
23           *section shall be construed to authorize or permit the*  
24           *Secretary, Department of Education, or a Depart-*  
25           *ment of Education contractor, to mandate, direct,*

1       *control, or suggest the selection of a mathematics cur-*  
2       *riculum, supplemental instructional materials, or*  
3       *program of instruction by a State, local educational*  
4       *agency, or school.*

5       *(k) SUPPLEMENT NOT SUPPLANT.—Each State edu-*  
6       *cational agency receiving a grant under this section shall*  
7       *use the grant funds to supplement, not supplant, State*  
8       *funding for activities authorized under this section or for*  
9       *other educational activities.*

10       *(l) SUBGRANTS TO ELIGIBLE LOCAL EDUCATIONAL*  
11       *AGENCIES.—*

12               *(1) APPLICATION.—*

13                       *(A) IN GENERAL.—Each eligible local edu-*  
14                       *cational agency desiring a subgrant under this*  
15                       *subsection shall submit an application to the*  
16                       *State educational agency in the form and ac-*  
17                       *cording to the schedule established by the State*  
18                       *educational agency.*

19                       *(B) CONTENTS.—In addition to any infor-*  
20                       *mation required by the State educational agency,*  
21                       *each application under paragraph (1) shall dem-*  
22                       *onstrate how the eligible local educational agency*  
23                       *will carry out the following required activities:*

1           (i) *Development or selection and im-*  
2           *plementation of research-based mathematics*  
3           *assessments.*

4           (ii) *Development or selection and im-*  
5           *plementation of research-based mathematics*  
6           *programs, including programs for students*  
7           *with disabilities and students with limited*  
8           *English proficiency.*

9           (iii) *Selection of instructional mate-*  
10           *rials based on mathematics research.*

11           (iv) *High-quality professional develop-*  
12           *ment for mathematics coaches and teachers*  
13           *based on mathematics research.*

14           (v) *Evaluation and assessment strate-*  
15           *gies.*

16           (vi) *Reporting.*

17           (vii) *Providing access to research-based*  
18           *mathematics materials.*

19           (C) *CONSORTIA.*—*Consistent with State*  
20           *law, an eligible local educational agency may*  
21           *apply to the State educational agency for a*  
22           *subgrant as a member of a consortium of local*  
23           *educational agencies if each member of the con-*  
24           *sortium is an eligible local educational agency.*

25           (2) *AWARD BASIS.*—

1           (A) *PRIORITY.*—A State educational agency  
2           awarding subgrants under this subsection shall  
3           give priority to eligible local educational agen-  
4           cies that—

5                   (i) are among the local educational  
6                   agencies in the State with the lowest grad-  
7                   uation rates, as described in section  
8                   1111(b)(2)(C)(vi) of the Elementary and  
9                   Secondary Education Act of 1965 (20  
10                  U.S.C. 6311(b)(2)(C)(vi)); and

11                  (ii) have the highest number or per-  
12                  centage of students who are counted under  
13                  section 1124(c) of the Elementary and Sec-  
14                  ondary Education Act of 1965 (20 U.S.C.  
15                  6333(c)).

16           (B) *AMOUNT OF GRANTS.*—Subgrants under  
17           this subsection shall be of sufficient size and  
18           scope to enable eligible local educational agencies  
19           to fully implement activities assisted under this  
20           subsection.

21           (3) *LOCAL USE OF FUNDS.*—Each eligible local  
22           educational agency receiving a subgrant under this  
23           subsection shall use the subgrant funds to carry out,  
24           at the secondary school level, the following services  
25           and activities:

1           (A) *Hiring mathematics coaches and pro-*  
2           *viding professional development for mathematics*  
3           *coaches—*

4                   (i) *at a level to provide effective coach-*  
5                   *ing to classroom teachers;*

6                   (ii) *to work with classroom teachers to*  
7                   *better assess student academic achievement*  
8                   *in mathematics;*

9                   (iii) *to work with classroom teachers to*  
10                   *identify students with mathematics prob-*  
11                   *lems and, where appropriate, refer students*  
12                   *to available programs for remediation and*  
13                   *additional services;*

14                   (iv) *to work with classroom teachers to*  
15                   *diagnose and remediate mathematics dif-*  
16                   *iculties of the lowest-performing students,*  
17                   *so that those teachers can provide intensive,*  
18                   *research-based instruction, including during*  
19                   *after-school and summer sessions, geared to-*  
20                   *ward ensuring that those students can ac-*  
21                   *cess and be successful in rigorous academic*  
22                   *coursework; and*

23                   (v) *to assess and organize student data*  
24                   *on mathematics and communicate that data*

1            *to school administrators to inform school re-*  
2            *form efforts.*

3            *(B) Reviewing, analyzing, developing, and,*  
4            *where possible, adapting curricula to make sure*  
5            *mathematics skills are taught within other core*  
6            *academic subjects.*

7            *(C) Providing mathematics professional de-*  
8            *velopment for all relevant teachers in secondary*  
9            *school, as necessary, that addresses both remedial*  
10           *and higher level mathematics skills for students*  
11           *in the applicable curriculum.*

12           *(D) Providing professional development for*  
13           *teachers, administrators, and paraprofessionals*  
14           *serving secondary schools to help the teachers,*  
15           *administrators, and paraprofessionals improve*  
16           *student academic achievement in mathematics.*

17           *(E) Procuring and implementing programs*  
18           *and instructional materials based on mathe-*  
19           *matics research, including software and other*  
20           *education technology related to mathematics in-*  
21           *struction with demonstrated effectiveness in im-*  
22           *proving mathematics instruction and student*  
23           *academic achievement.*

24           *(F) Building on and promoting coordina-*  
25           *tion among mathematics programs in the eligible*

1           *local educational agency to increase overall effec-*  
2           *tiveness in—*

3                     *(i) improving mathematics instruction;*

4                     *and*

5                     *(ii) increasing student academic*  
6                     *achievement, including for students with*  
7                     *disabilities and students with limited*  
8                     *English proficiency.*

9                     *(G) Evaluating the effectiveness of the in-*  
10                    *structional strategies, teacher professional devel-*  
11                    *opment programs, and other interventions that*  
12                    *are implemented under the subgrant; and*

13                    *(H) Measuring improvement in student*  
14                    *academic achievement, including through*  
15                    *progress monitoring or other assessments.*

16                    *(4) SUPPLEMENT NOT SUPPLANT.—Each eligible*  
17                    *local educational agency receiving a subgrant under*  
18                    *this subsection shall use the subgrant funds to supple-*  
19                    *ment, not supplant, the eligible local educational*  
20                    *agency's funding for activities authorized under this*  
21                    *section or for other educational activities.*

22                    *(5) NEW SERVICES AND ACTIVITIES.—Subgrant*  
23                    *funds provided under this subsection may be used*  
24                    *only to provide services and activities authorized*

1     *under this section that were not provided on the day*  
2     *before the date of enactment of this Act.*

3             (6) *EVALUATIONS.—Each eligible local edu-*  
4     *cational agency receiving a grant under this sub-*  
5     *section shall participate, as requested by the State*  
6     *educational agency or the Secretary, in reviews and*  
7     *evaluations of the programs of the eligible local edu-*  
8     *cational agency and the effectiveness of such pro-*  
9     *grams, and shall provide such reports as are requested*  
10    *by the State educational agency and the Secretary.*

11    (m) *MATCHING REQUIREMENTS.—*

12             (1) *STATE EDUCATIONAL AGENCY REQUIRE-*  
13    *MENTS.—A State educational agency that receives a*  
14    *grant under this section shall provide, from non-Fed-*  
15    *eral sources, an amount equal to 50 percent of the*  
16    *amount of the grant, in cash or in-kind, to carry out*  
17    *the activities supported by the grant, of which not*  
18    *more than 20 percent of such 50 percent may be pro-*  
19    *vided by local educational agencies within the State.*

20             (2) *WAIVER.—The Secretary may waive all or a*  
21    *portion of the matching requirements described in*  
22    *paragraph (1) for any fiscal year, if the Secretary de-*  
23    *termines that—*

1           (A) *the application of the matching require-*  
2           *ment will result in serious hardship for the State*  
3           *educational agency; or*

4           (B) *providing a waiver best serves the pur-*  
5           *pose of the program assisted under this section.*

6       (n) *PROGRAM PERFORMANCE AND ACCOUNTABILITY.—*

7           (1) *INFORMATION.—Each State educational*  
8           *agency receiving a grant under this section shall col-*  
9           *lect and report to the Secretary annually such infor-*  
10           *mation on the results of the grant as the Secretary*  
11           *may reasonably require, including information on—*

12           (A) *mathematics achievement data that*  
13           *show the progress of students participating in*  
14           *projects under this section (including, to the ex-*  
15           *tent practicable, comparable data from students*  
16           *not participating in such projects), based pri-*  
17           *marily on the results of State, school district-*  
18           *wide, or classroom-based monitoring reports or*  
19           *assessments, including—*

20           (i) *specific identification of those*  
21           *schools and eligible local educational agen-*  
22           *cies that report the largest gains in mathe-*  
23           *matics achievement; and*

1           (ii) evidence on whether the State edu-  
2           cational agency and eligible local edu-  
3           cational agencies within the State have—

4                   (I) significantly increased the  
5                   number of students achieving at the  
6                   proficient or advanced level on the  
7                   State student academic achievement  
8                   standards in mathematics under sec-  
9                   tion 1111(b)(1)(D)(ii) of the Elemen-  
10                  tary and Secondary Education Act of  
11                  1965 (20 U.S.C. 6311(b)(1)(D)(ii));

12                  (II) significantly increased the  
13                  percentages of students described in  
14                  section 1111(b)(2)(C)(v)(II) of the Ele-  
15                  mentary and Secondary Education Act  
16                  of 1965 (20 U.S.C.  
17                  6311(b)(2)(C)(v)(II)) who are achiev-  
18                  ing proficiency or advanced levels on  
19                  such State academic content standards  
20                  in mathematics;

21                  (III) significantly increased the  
22                  number of students making significant  
23                  progress toward meeting such State  
24                  academic content and achievement  
25                  standards in mathematics; and

1                   (IV) successfully implemented this  
2                   section;

3                   (B) the percentage of students in the schools  
4                   served by the eligible local educational agency  
5                   who enroll in advanced mathematics courses in  
6                   grades 9 through 12, including the percentage of  
7                   such students who pass such courses; and

8                   (C) the progress made in increasing the  
9                   quality and accessibility of professional develop-  
10                  ment and leadership activities in mathematics,  
11                  especially activities resulting in greater content  
12                  knowledge and expertise of teachers, administra-  
13                  tors, and other school staff, except that the Sec-  
14                  retary shall not require such information until  
15                  after the third year of a grant awarded under  
16                  this section.

17                  (2) *REPORTING AND DISAGGREGATION.*—The in-  
18                  formation required under paragraph (1) shall be—

19                         (A) reported in a manner that allows for a  
20                         comparison of aggregated score differentials of  
21                         student academic achievement before (to the ex-  
22                         tent feasible) and after implementation of the  
23                         project assisted under this section; and

24                         (B) disaggregated in the same manner as  
25                         information is disaggregated under section

1            *1111(h)(1)(C)(i) of the Elementary and Sec-*  
2            *ondary Education Act of 1965 (20 U.S.C.*  
3            *6311(h)(1)(C)(i)).*

4        **TITLE III—FOREIGN LANGUAGE**  
5            **PARTNERSHIP PROGRAM**

6        **SEC. 3301. FINDINGS AND PURPOSE.**

7            *(a) FINDINGS.—Congress makes the following findings:*

8                    *(1) The United States faces a shortage of skilled*  
9                    *professionals with higher levels of proficiency in for-*  
10                   *oreign languages and area knowledge critical to the Na-*  
11                   *tion’s security.*

12                   *(2) Given the Nation’s economic competitiveness*  
13                   *interests, it is crucial that our Nation expand the*  
14                   *number of Americans who are able to function effec-*  
15                   *tively in the environments in which critical foreign*  
16                   *languages are spoken.*

17                   *(3) Students’ ability to become proficient in for-*  
18                   *oreign languages can be addressed by starting language*  
19                   *learning at a younger age and expanding opportuni-*  
20                   *ties for continuous foreign language education from*  
21                   *elementary school through postsecondary education.*

22            *(b) PURPOSE.—The purpose of this title is to signifi-*  
23            *cantly increase—*

1           (1) *the opportunities to study critical foreign*  
2 *languages and the context in which the critical for-*  
3 *ign languages are spoken; and*

4           (2) *the number of American students who achieve*  
5 *the highest level of proficiency in critical foreign lan-*  
6 *guages.*

7 **SEC. 3302. DEFINITIONS.**

8 *In this title:*

9           (1) *ELIGIBLE RECIPIENT.*—*The term “eligible re-*  
10 *cipient” means an institution of higher education*  
11 *that receives grant funds under this title on behalf of*  
12 *a partnership for use in carrying out the activities*  
13 *assisted under this title.*

14           (2) *PARTNERSHIP.*—*The term “partnership”*  
15 *means a partnership that—*

16           (A) *shall include—*

17                   (i) *an institution of higher education;*

18                   *and*

19                   (ii) *1 or more local educational agen-*  
20 *cies; and*

21           (B) *may include 1 or more entities that*  
22 *support the purposes of this title.*

23           (3) *SUPERIOR LEVEL OF PROFICIENCY.*—*The*  
24 *term “superior level of proficiency” means level 3, the*  
25 *professional working level, as measured by the Federal*

1 *Interagency Language Roundtable (ILR) or by other*  
2 *generally recognized measures of superior standards.*

3 **SEC. 3303. PROGRAM AUTHORIZED.**

4 (a) *PROGRAM AUTHORIZED.*—

5 (1) *IN GENERAL.*—*The Secretary is authorized to*  
6 *award grants to eligible recipients to enable partner-*  
7 *ships served by the eligible recipients to establish ar-*  
8 *ticulated programs of study in critical foreign lan-*  
9 *guages that will enable students to advance success-*  
10 *fully from elementary school through postsecondary*  
11 *education and achieve higher levels of proficiency in*  
12 *a critical foreign language.*

13 (2) *DURATION.*—*A grant awarded under para-*  
14 *graph (1) shall be for a period of not more than 5*  
15 *years. A grant may be renewed for not more than 2*  
16 *additional 5-year periods, if the Secretary determines*  
17 *that the partnership's program is effective and the re-*  
18 *newal will best serve the purposes of this title.*

19 (b) *APPLICATIONS.*—

20 (1) *IN GENERAL.*—*Each eligible recipient desir-*  
21 *ing a grant under this section shall submit an appli-*  
22 *cation to the Secretary at such time, in such manner,*  
23 *and containing such information as the Secretary*  
24 *may require.*

25 (2) *CONTENTS.*—*Each application shall—*

1           (A) identify each local educational agency  
2 partner, including contact information and let-  
3 ters of commitment, and describe the responsibil-  
4 ities of each member of the partnership,  
5 including—

6           (i) how each of the partners will be in-  
7 volved in planning, developing, and  
8 implementing—

9           (I) program curriculum and ma-  
10 terials; and

11           (II) teacher professional develop-  
12 ment;

13           (ii) what resources each of the partners  
14 will provide; and

15           (iii) how the partners will contribute  
16 to ensuring the continuity of student  
17 progress from elementary school through the  
18 postsecondary level;

19           (B) describe how an articulated curriculum  
20 for students will be developed and implemented,  
21 which may include the use and integration of  
22 technology into such curriculum;

23           (C) identify target proficiency levels for stu-  
24 dents at critical benchmarks (such as grades 4,  
25 8, and 12), and describe how progress toward

1           *those proficiency levels will be assessed at the*  
2           *benchmarks, and how the program will use the*  
3           *results of the assessments to ensure continuous*  
4           *progress toward achieving a superior level of*  
5           *proficiency at the postsecondary level;*

6           *(D) describe how the partnership will—*

7                   *(i) ensure that students from a pro-*  
8                   *gram assisted under this title who are be-*  
9                   *ginning postsecondary education will be as-*  
10                  *essed and enabled to progress to a superior*  
11                  *level of proficiency;*

12                  *(ii) address the needs of students al-*  
13                  *ready at, or near, the superior level of pro-*  
14                  *ficiency, which may include diagnostic as-*  
15                  *sessments for placement purposes, cus-*  
16                  *tomized and individualized language learn-*  
17                  *ing opportunities, and experimental and*  
18                  *interdisciplinary language learning; and*

19                  *(iii) identify and describe how the*  
20                  *partnership will work with institutions of*  
21                  *higher education outside the partnership to*  
22                  *provide participating students with mul-*  
23                  *tiple options for postsecondary education*  
24                  *consistent with the purposes of this title;*

1           (E) describe how the partnership will sup-  
2           port and continue the program after the grant  
3           has expired, including how the partnership will  
4           seek support from other sources, such as State  
5           and local governments, foundations, and the pri-  
6           vate sector; and

7           (F) describe what assessments will be used  
8           or, if assessments not available, how assessments  
9           will be developed.

10       (c) *USES OF FUNDS.*—Grant funds awarded under  
11 *this title*—

12           (1) shall be used to develop and implement pro-  
13           grams at the elementary school level through postsec-  
14           ondary education, consistent with the purpose of this  
15           title, including—

16                   (A) the development of curriculum and in-  
17                   structional materials; and

18                   (B) recruitment of students; and

19           (2) may be used for—

20                   (A) teacher recruitment (including recruit-  
21                   ment from other professions and recruitment of  
22                   native-language speakers in the community) and  
23                   professional development directly related to the  
24                   purposes of this title at the elementary school  
25                   through secondary school levels;

1           (B) development of appropriate assessments;

2           (C) opportunities for maximum language  
3 exposure for students in the program, such as the  
4 creation of immersion environments (such as  
5 language houses, language tables, immersion  
6 classrooms, and weekend and summer experi-  
7 ences) and special tutoring and academic sup-  
8 port;

9           (D) dual language immersion programs;

10          (E) scholarships and study-abroad opportu-  
11 nities, related to the program, for postsecondary  
12 students and newly recruited teachers who have  
13 advanced levels of proficiency in a critical for-  
14 eign language, except that not more than 20 per-  
15 cent of the grant funds provided to an eligible re-  
16 cipient under this section for a fiscal year may  
17 be used to carry out this subparagraph;

18          (F) activities to encourage community in-  
19 volvement to assist in meeting the purposes of  
20 this title;

21          (G) summer institutes for students and  
22 teachers;

23          (H) bridge programs that allow dual enroll-  
24 ment for secondary school students in institu-  
25 tions of higher education;

1           (I) programs that expand the under-  
 2           standing and knowledge of historic, geographic,  
 3           and contextual factors within countries with  
 4           populations who speak critical foreign languages,  
 5           if such programs are carried out in conjunction  
 6           with language instruction;

7           (J) research on, and evaluation of, the  
 8           teaching of critical foreign languages;

9           (K) data collection and analysis regarding  
 10          the results of—

11                 (i) various student recruitment strate-  
 12                 gies;

13                 (ii) program design; and

14                 (iii) curricular approaches;

15          (L) the impact of the strategies, program  
 16          design, and curricular approaches described in  
 17          subparagraph (K) on increasing—

18                 (i) the number of students studying  
 19                 critical foreign languages; and

20                 (ii) the proficiency of the students in  
 21                 the critical foreign languages; and

22          (M) distance learning projects for critical  
 23          foreign language learning.

24          (d) *MATCHING REQUIREMENT.*—

1           (1) *IN GENERAL.*—*An eligible recipient that re-*  
2           *ceives a grant under this title shall provide, toward*  
3           *the cost of carrying out the activities supported by the*  
4           *grant, from non-Federal sources, an amount equal*  
5           *to—*

6                   (A) *20 percent of the amount of the grant*  
7                   *payment for the first fiscal year for which a*  
8                   *grant payment is made;*

9                   (B) *30 percent of the amount of the grant*  
10                   *payment for the second such fiscal year;*

11                   (C) *40 percent of the amount of the grant*  
12                   *payment for the third such fiscal year; and*

13                   (D) *50 percent of the amount of the grant*  
14                   *payment for each of the fourth and fifth such fis-*  
15                   *cal years.*

16           (2) *NON-FEDERAL SHARE.*—*The non-Federal*  
17           *share required under paragraph (1) may be provided*  
18           *in cash or in-kind.*

19           (3) *WAIVER.*—*The Secretary may waive all or*  
20           *part of the matching requirement of paragraph (1),*  
21           *for any fiscal year, if the Secretary determines that—*

22                   (A) *the application of the matching require-*  
23                   *ment will result in serious hardship for the part-*  
24                   *nership; or*

1                   (B) *the waiver will best serve the purposes*  
2                   *of this title.*

3           (e) *SUPPLEMENT NOT SUPPLANT.—Grant funds pro-*  
4 *vided under this title shall be used to supplement, not sup-*  
5 *plant, other Federal and non-Federal funds available to*  
6 *carry out the activities described in subsection (c).*

7           (f) *TECHNICAL ASSISTANCE.—The Secretary shall*  
8 *enter into a contract to establish a technical assistance cen-*  
9 *ter to provide technical assistance to partnerships devel-*  
10 *oping critical foreign language programs assisted under*  
11 *this section. The center shall—*

12                   (1) *assist the partnerships in the development of*  
13 *critical foreign language instructional materials and*  
14 *assessments; and*

15                   (2) *disseminate promising foreign language in-*  
16 *structional practices.*

17           (g) *PROGRAM EVALUATION.—*

18                   (1) *IN GENERAL.—The Secretary may reserve*  
19 *not more than 5 percent of the total amount appro-*  
20 *priated for this title for any fiscal year to annually*  
21 *evaluate the programs under this title.*

22                   (2) *REPORT.—The Secretary shall prepare and*  
23 *annually submit, to the Committee on Health, Edu-*  
24 *cation, Labor, and Pensions of the Senate, the Com-*  
25 *mittee on Education and the Workforce of the House*

1 *of Representatives, and the Committees on Appropriations*  
 2 *of the Senate and House of Representatives, a*  
 3 *report on the results of any program evaluation con-*  
 4 *ducted under this subsection.*

5 **SEC. 3304. AUTHORIZATION OF APPROPRIATIONS.**

6 *For the purpose of carrying out this title, there are*  
 7 *authorized to be appropriated \$22,000,000 for fiscal year*  
 8 *2008, and such sums as may be necessary for each of the*  
 9 *3 succeeding fiscal years.*

10 **TITLE IV—ALIGNMENT OF**  
 11 **EDUCATION PROGRAMS**

12 **SEC. 3401. ALIGNMENT OF SECONDARY SCHOOL GRADUA-**  
 13 **TION REQUIREMENTS WITH THE DEMANDS**  
 14 **OF 21ST CENTURY POSTSECONDARY ENDEAV-**  
 15 **ORS AND SUPPORT FOR P-16 EDUCATION**  
 16 **DATA SYSTEMS.**

17 *(a) PURPOSE.—It is the purpose of this section—*

18 *(1) to promote more accountability with respect*  
 19 *to preparation for higher education, the 21st century*  
 20 *workforce, and the Armed Forces, by aligning—*

21 *(A) student knowledge, student skills, State*  
 22 *academic content standards and assessments,*  
 23 *and curricula, in elementary and secondary edu-*  
 24 *cation, especially with respect to mathematics,*

1 science, reading, and, where applicable, engineer-  
2 ing and technology; with

3 (B) the demands of higher education, the  
4 21st century workforce, and the Armed Forces;

5 (2) to support the establishment or improvement  
6 of statewide P–16 education data systems that—

7 (A) assist States in improving the rigor and  
8 quality of State academic content standards and  
9 assessments;

10 (B) ensure students are prepared to succeed  
11 in—

12 (i) academic credit-bearing coursework  
13 in higher education without the need for re-  
14 mediation;

15 (ii) the 21st century workforce; or

16 (iii) the Armed Forces; and

17 (3) enable States to have valid and reliable in-  
18 formation to inform education policy and practice.

19 (b) DEFINITIONS.—In this section:

20 (1) INSTITUTION OF HIGHER EDUCATION.—The  
21 term “institution of higher education” has the mean-  
22 ing given the term in section 101(a) of the Higher  
23 Education Act of 1965 (20 U.S.C. 1001(a)).

1           (2) *P–16 EDUCATION.*—*The term “P–16 edu-*  
2 *cation” means the educational system from preschool*  
3 *through the conferring of a baccalaureate degree.*

4           (3) *STATEWIDE PARTNERSHIP.*—*The term*  
5 *“statewide partnership” means a partnership that—*

6                   (A) *shall include—*

7                           (i) *the Governor of the State or the des-*  
8 *ignee of the Governor;*

9                           (ii) *the heads of the State systems for*  
10 *public higher education, or, if such a posi-*  
11 *tion does not exist, not less than 1 rep-*  
12 *resentative of a public degree-granting insti-*  
13 *tution of higher education;*

14                           (iii) *a representative of the agencies in*  
15 *the State that administer Federal or State-*  
16 *funded early childhood education programs;*

17                           (iv) *not less than 1 representative of a*  
18 *public community college;*

19                           (v) *not less than 1 representative of a*  
20 *technical school;*

21                           (vi) *not less than 1 representative of a*  
22 *public secondary school;*

23                           (vii) *the chief State school officer;*

24                           (viii) *the chief executive officer of the*  
25 *State higher education coordinating board;*

1                   *(ix) not less than 1 public elementary*  
2                   *school teacher employed in the State;*

3                   *(x) not less than 1 early childhood edu-*  
4                   *cator in the State;*

5                   *(xi) not less than 1 public secondary*  
6                   *school teacher employed in the State;*

7                   *(xii) not less than 1 representative of*  
8                   *the business community in the State; and*

9                   *(xiii) not less than 1 member of the*  
10                  *Armed Forces; and*

11                  *(B) may include other individuals or rep-*  
12                  *resentatives of other organizations, such as a*  
13                  *school administrator, a faculty member at an in-*  
14                  *stitution of higher education, a member of a*  
15                  *civic or community organization, a representa-*  
16                  *tive from a private institution of higher edu-*  
17                  *cation, a dean or similar representative of a*  
18                  *school of education at an institution of higher*  
19                  *education or a similar teacher certification or li-*  
20                  *cence program, or the State official responsible*  
21                  *for economic development.*

22                  *(c) GRANTS AUTHORIZED.—The Secretary is author-*  
23                  *ized to award grants, on a competitive basis, to States to*  
24                  *enable each such State to work with a statewide*  
25                  *partnership—*

1           (1) *to promote better alignment of content knowl-*  
2 *edge requirements for secondary school graduation*  
3 *with the knowledge and skills needed to succeed in*  
4 *postsecondary education, the 21st century workforce,*  
5 *or the Armed Forces; or*

6           (2) *to establish or improve a statewide P-16*  
7 *education data system.*

8       (d) *PERIOD OF GRANTS; NON-RENEWABILITY.—*

9           (1) *GRANT PERIOD.—The Secretary shall award*  
10 *a grant under this section for a period of not more*  
11 *than 3 years.*

12          (2) *NON-RENEWABILITY.—The Secretary shall*  
13 *not award a State more than 1 grant under this sec-*  
14 *tion.*

15       (e) *AUTHORIZED ACTIVITIES.—*

16          (1) *GRANTS FOR P-16 ALIGNMENT.—Each State*  
17 *receiving a grant under subsection (c)(1)—*

18           (A) *shall use the grant funds for—*

19               (i) *identifying and describing the con-*  
20 *tent knowledge and skills students who enter*  
21 *institutions of higher education, the work-*  
22 *force, and the Armed Forces need to have in*  
23 *order to succeed without any remediation*  
24 *based on detailed requirements obtained*

1           *from institutions of higher education, em-*  
2           *ployers, and the Armed Forces;*

3           (ii) *identifying and making changes*  
4           *that need to be made to a State's secondary*  
5           *school graduation requirements, academic*  
6           *content standards, academic achievement*  
7           *standards, and assessments preceding grad-*  
8           *uation from secondary school in order to*  
9           *align the requirements, standards, and as-*  
10           *sessments with the knowledge and skills nec-*  
11           *essary for success in academic credit-bear-*  
12           *ing coursework in postsecondary education,*  
13           *in the 21st century workforce, and in the*  
14           *Armed Forces without the need for remedi-*  
15           *ation;*

16           (iii) *convening stakeholders within the*  
17           *State and creating a forum for identifying*  
18           *and deliberating on education issues that—*

19                   (I) *involve preschool through*  
20                   *grade 12 education, postsecondary edu-*  
21                   *cation, the 21st century workforce, and*  
22                   *the Armed Forces; and*

23                   (II) *transcend any single system*  
24                   *of education's ability to address; and*

1           *(iv) implementing activities designed*  
2           *to ensure the enrollment of all elementary*  
3           *school and secondary school students in rig-*  
4           *orous coursework, which may include—*

5                   *(I) specifying the courses and per-*  
6                   *formance levels necessary for accept-*  
7                   *ance into institutions of higher edu-*  
8                   *cation; and*

9                   *(II) developing or providing guid-*  
10                  *ance to local educational agencies*  
11                  *within the State on the adoption of*  
12                  *curricula and assessments aligned with*  
13                  *State academic content standards,*  
14                  *which assessments may be used as*  
15                  *measures of student academic achieve-*  
16                  *ment in secondary school as well as for*  
17                  *entrance or placement at institutions*  
18                  *of higher education, including through*  
19                  *collaboration with institutions of high-*  
20                  *er education in, or State educational*  
21                  *agencies serving, other States; and*

22           *(B) may use the grant funds for—*

23                   *(i) developing and making available*  
24                   *specific opportunities for extensive profes-*  
25                   *sional development for teachers, paraprofes-*

1           sionals, principals, and school administra-  
2           tors, including collection and dissemination  
3           of effective teaching practices to improve in-  
4           struction and instructional support mecha-  
5           nisms;

6           (ii) identifying changes in State aca-  
7           demic content standards, academic achieve-  
8           ment standards, and assessments for stu-  
9           dents in grades preceding secondary school  
10          in order to ensure such standards and as-  
11          sessments are appropriately aligned and  
12          adequately reflect the content needed to pre-  
13          pare students to enter secondary school;

14          (iii) developing a plan to provide re-  
15          mediation and additional learning opportu-  
16          nities for students who are performing  
17          below grade level to ensure that all students  
18          will have the opportunity to meet secondary  
19          school graduation requirements;

20          (iv) identifying and addressing teacher  
21          certification needs; or

22          (v) incorporating 21st century learn-  
23          ing skills into the State plan, which skills  
24          shall include critical thinking, problem solv-  
25          ing, communication, collaboration, global

1           *awareness, and business and financial lit-*  
2           *eracy.*

3           (2) *GRANTS FOR STATEWIDE P-16 EDUCATION*  
4       *DATA SYSTEMS.—*

5           (A) *ESTABLISHMENT OF SYSTEM.—Each*  
6       *State that receives a grant under subsection*  
7       *(c)(2) shall establish a statewide P-16 education*  
8       *longitudinal data system that—*

9                   (i) *provides each student, upon enroll-*  
10                  *ment in a public elementary school or sec-*  
11                  *ondary school in the State, with a unique*  
12                  *identifier, such as a bar code, that—*

13                           (I) *does not permit a student to be*  
14                           *individually identified by users of the*  
15                           *system; and*

16                           (II) *is retained throughout the*  
17                           *student's enrollment in P-16 education*  
18                           *in the State; and*

19                           (ii) *meets the requirements of subpara-*  
20                           *graphs (B) through (E).*

21           (B) *IMPROVEMENT OF EXISTING SYSTEM.—*  
22       *Each State that receives a grant under sub-*  
23       *section (c)(2) for the improvement of a statewide*  
24       *P-16 education data system may employ, co-*  
25       *ordinate, or revise an existing statewide data*

1           *system to establish a statewide longitudinal P-*  
2           *16 education data system that meets the require-*  
3           *ments of subparagraph (A), if the statewide lon-*  
4           *gitudinal P-16 education data system produces*  
5           *valid and reliable data.*

6           (C) *PRIVACY AND ACCESS TO DATA.—*

7           (i) *IN GENERAL.—Each State that re-*  
8           *ceives a grant under subsection (c)(2) shall*  
9           *implement measures to—*

10           (I) *limit the State’s use of infor-*  
11           *mation in the statewide P-16 edu-*  
12           *cation data system to the purposes and*  
13           *functions for use of such information*  
14           *set forth in Federal or State law re-*  
15           *garding education and allow access to*  
16           *the information in the statewide data*  
17           *system only to those State employees,*  
18           *and only on such terms, as may be*  
19           *necessary to fulfill those purposes and*  
20           *functions;*

21           (II) *prohibit the disclosure of in-*  
22           *formation in the statewide P-16 edu-*  
23           *cation data system to any other per-*  
24           *son, agency, institution, or entity, ex-*  
25           *cept to the extent necessary to assist*

1           *the State in fulfilling the purposes and*  
2           *functions for use of such information*  
3           *set forth in Federal or State law re-*  
4           *garding education, and only if such*  
5           *party has signed a data use agreement*  
6           *that—*

7                     *(aa) prohibits the party from*  
8                     *further disclosing the information;*

9                     *(bb) prohibits the party from*  
10                    *using the information for any*  
11                    *purpose other than the purpose*  
12                    *specified in the agreement, which*  
13                    *purpose must relate to assisting*  
14                    *the State in carrying out the pur-*  
15                    *poses and functions for use of such*  
16                    *information set forth in Federal*  
17                    *or State law regarding education;*  
18                    *and*

19                    *(cc) requires the party to de-*  
20                    *stroy the information when the*  
21                    *purpose for which the disclosure*  
22                    *was made is accomplished;*

23                    *(III) keep an accurate accounting*  
24                    *of the date, nature, and purpose of*  
25                    *each disclosure of information in the*

1           *statewide P–16 education data system,*  
2           *and the name and address of the per-*  
3           *son, agency, institution, or entity to*  
4           *whom the disclosure is made, which ac-*  
5           *counting shall be made available on re-*  
6           *quest to parents of any student whose*  
7           *information has been disclosed;*

8                   *(IV) maintain adequate security*  
9                   *measures to ensure the confidentiality*  
10                  *and integrity of the data system;*

11                   *(V) ensure that the statewide P–*  
12                  *16 education data system meets any*  
13                  *further requirements of the Family*  
14                  *Educational Rights and Privacy Act of*  
15                  *1974 (20 U.S.C. 1232g);*

16                   *(VI) where rights are provided to*  
17                  *parents under this clause, provide those*  
18                  *rights to the student instead of the par-*  
19                  *ent if the student has reached the age*  
20                  *of 18 or is enrolled in a postsecondary*  
21                  *educational institution; and*

22                   *(VII) ensure adequate enforcement*  
23                  *of the requirements of this clause.*

24                  *(ii) USE OF UNIQUE IDENTIFIERS.—*

1                   (I) *GOVERNMENTAL USE OF*  
2                   *UNIQUE IDENTIFIERS.*—*It shall be un-*  
3                   *lawful for any Federal, State, or local*  
4                   *governmental agency to use the unique*  
5                   *identifiers employed in the statewide*  
6                   *P–16 education data systems for any*  
7                   *purpose other than as authorized by*  
8                   *Federal or State law regarding edu-*  
9                   *cation, or to deny any individual any*  
10                  *right, benefit, or privilege provided by*  
11                  *law because of such individual’s refusal*  
12                  *to disclose the individual’s unique*  
13                  *identifier.*

14                  (II) *REGULATIONS.*—*Not later*  
15                  *than 180 days after the date of enact-*  
16                  *ment of this Act, the Secretary of Edu-*  
17                  *cation shall promulgate regulations*  
18                  *governing the use by governmental and*  
19                  *non-governmental entities of the unique*  
20                  *identifiers employed in statewide P–16*  
21                  *education data systems, including,*  
22                  *where necessary, regulations requiring*  
23                  *States desiring grants for statewide P–*  
24                  *16 education data systems under this*  
25                  *section to implement specified meas-*

1                    *ures, with the goal of safeguarding in-*  
2                    *dividual privacy to the maximum ex-*  
3                    *tent practicable consistent with the*  
4                    *uses of the information authorized in*  
5                    *this Act or other Federal or State law*  
6                    *regarding education.*

7                    *(D) REQUIRED ELEMENTS OF A STATEWIDE*  
8                    *P-16 EDUCATION DATA SYSTEM.—The State shall*  
9                    *ensure that the statewide P-16 education data*  
10                    *system includes the following elements:*

11                    *(i) PRESCHOOL THROUGH GRADE 12*  
12                    *EDUCATION AND POSTSECONDARY EDU-*  
13                    *CATION.—With respect to preschool through*  
14                    *grade 12 education and postsecondary*  
15                    *education—*

16                    *(I) a unique statewide student*  
17                    *identifier that does not permit a stu-*  
18                    *dent to be individually identified by*  
19                    *users of the system;*

20                    *(II) student-level enrollment, de-*  
21                    *mographic, and program participation*  
22                    *information;*

23                    *(III) student-level information*  
24                    *about the points at which students exit,*

1                   *transfer in, transfer out, drop out, or*  
2                   *complete P–16 education programs;*

3                   *(IV) the capacity to communicate*  
4                   *with higher education data systems;*  
5                   *and*

6                   *(V) a State data audit system as-*  
7                   *sessing data quality, validity, and reli-*  
8                   *ability.*

9                   *(ii) PRESCHOOL THROUGH GRADE 12*  
10                  *EDUCATION.—With respect to preschool*  
11                  *through grade 12 education—*

12                   *(I) yearly test records of indi-*  
13                   *vidual students with respect to assess-*  
14                   *ments under section 1111(b) of the Ele-*  
15                   *mentary and Secondary Education Act*  
16                   *of 1965 (20 U.S.C. 6311(b));*

17                   *(II) information on students not*  
18                   *tested by grade and subject;*

19                   *(III) a teacher identifier system*  
20                   *with the ability to match teachers to*  
21                   *students;*

22                   *(IV) student-level transcript infor-*  
23                   *mation, including information on*  
24                   *courses completed and grades earned;*  
25                   *and*

1                   (V) *student-level college readiness*  
2                   *test scores.*

3                   (iii) *POSTSECONDARY EDUCATION.—*  
4                   *With respect to postsecondary education,*  
5                   *data that provide—*

6                   (I) *information regarding the ex-*  
7                   *tent to which students transition suc-*  
8                   *cessfully from secondary school to post-*  
9                   *secondary education, including whether*  
10                   *students enroll in remedial coursework;*  
11                   *and*

12                   (II) *other information determined*  
13                   *necessary to address alignment and*  
14                   *adequate preparation for success in*  
15                   *postsecondary education.*

16                   (E) *FUNCTIONS OF THE STATEWIDE P-16*  
17                   *EDUCATION DATA SYSTEM.—In implementing the*  
18                   *statewide P-16 education data system, the State*  
19                   *shall—*

20                   (i) *identify factors that correlate to*  
21                   *students' ability to successfully engage in*  
22                   *and complete postsecondary-level general*  
23                   *education coursework without the need for*  
24                   *prior developmental coursework;*

1           (ii) identify factors to increase the per-  
2           centage of low-income and minority stu-  
3           dents who are academically prepared to  
4           enter and successfully complete postsec-  
5           ondary-level general education coursework;  
6           and

7           (iii) use the data in the system to oth-  
8           erwise inform education policy and practice  
9           in order to better align State academic con-  
10          tent standards, and curricula, with the de-  
11          mands of postsecondary education, the 21st  
12          century workforce, and the Armed Forces.

13       (f) APPLICATION.—

14           (1) IN GENERAL.—Each State desiring a grant  
15           under this section shall submit an application to the  
16           Secretary at such time, in such manner, and con-  
17           taining such information as the Secretary may rea-  
18           sonably require.

19           (2) APPLICATION CONTENTS.—Each application  
20           submitted under this section shall specify whether the  
21           State application is for the conduct P–16 education  
22           alignment activities, or the establishment or improve-  
23           ment of a statewide P–16 education data system. The  
24           application shall include, at a minimum, the fol-  
25           lowing:

1           (A) *A description of the activities and pro-*  
2           *grams to be carried out with the grant funds and*  
3           *a comprehensive plan for carrying out the activi-*  
4           *ties.*

5           (B) *A description of how the concerns and*  
6           *interests of the larger education community, in-*  
7           *cluding parents, students, teachers, teacher edu-*  
8           *cators, principals, and preschool administrators*  
9           *will be represented in carrying out the author-*  
10          *ized activities described in subsection (e).*

11          (C) *In the case of a State applying for*  
12          *funding for P–16 education alignment, a de-*  
13          *scription of how the State will provide assistance*  
14          *to local educational agencies in implementing*  
15          *rigorous State academic content standards, sub-*  
16          *stantive curricula, remediation, and acceleration*  
17          *opportunities for students, as well as other*  
18          *changes determined necessary by the State.*

19          (D) *In the case of a State applying for*  
20          *funding to establish or improve a statewide P–*  
21          *16 education data system—*

22                 (i) *a description of the privacy protec-*  
23                 *tion and enforcement measures that the*  
24                 *State has implemented or will implement*  
25                 *pursuant to subparagraph (C), and assur-*

1            *ances that these measures will be in place*  
2            *prior to the establishment or improvement*  
3            *of the statewide P–16 education data sys-*  
4            *tem; and*

5            *(ii) an assurance that the State will*  
6            *continue to fund the statewide P–16 edu-*  
7            *cation data system after the end of the*  
8            *grant period.*

9            *(g) SUPPLEMENT NOT SUPPLANT.—Grant funds pro-*  
10          *vided under this section shall be used to supplement, not*  
11          *supplant, other Federal, State, and local funds available to*  
12          *carry out the authorized activities described in subsection*  
13          *(e).*

14          *(h) MATCHING REQUIREMENT.—Each State that re-*  
15          *ceives a grant under this section shall provide, from non-*  
16          *Federal sources, an amount equal to 100 percent of the*  
17          *amount of the grant, in cash or in kind, to carry out the*  
18          *activities supported by the grant.*

19          *(i) RULE OF CONSTRUCTION.—Nothing in this section*  
20          *shall be construed to require States to provide raw data*  
21          *to the Secretary.*

22          *(j) AUTHORIZATION OF APPROPRIATIONS.—There are*  
23          *authorized to be appropriated to carry out this section*  
24          *\$100,000,000 for fiscal year 2008 and such sums as may*  
25          *be necessary for fiscal year 2009.*

1 **TITLE V—MATHEMATICS AND**  
2 **SCIENCE PARTNERSHIP**  
3 **BONUS GRANTS.**

4 **SEC. 3501. MATHEMATICS AND SCIENCE PARTNERSHIP**  
5 **BONUS GRANTS.**

6 (a) *IN GENERAL.*—From amounts appropriated under  
7 subsection (d), the Secretary of Education shall award a  
8 grant—

9 (1) for each of the school years 2007–2008  
10 through 2010–2011, to each of the 3 elementary  
11 schools and each of the 3 secondary schools each of  
12 which has a high concentration of low income stu-  
13 dents as defined in section 1707(2) of the Elementary  
14 and Secondary Education Act of 1965 (20 U.S.C.  
15 6537(3)), in each State whose students demonstrate  
16 the most improvement in mathematics, as measured  
17 by the improvement in the students' average score on  
18 the State's assessments in mathematics for the school  
19 year for which the grant is awarded, as compared to  
20 the school year preceding the school year for which the  
21 grant is awarded; and

22 (2) for each of the school years 2008–2009  
23 through 2010–2011, to each of the 3 elementary  
24 schools and each of the 3 secondary schools each of  
25 which has a high concentration of low income stu-

1        *dents as defined in section 1707(2) of the Elementary*  
2        *and Secondary Education Act of 1965 (20 U.S.C.*  
3        *6537(3)), in each State whose students demonstrate*  
4        *the most improvement in science, as measured by the*  
5        *improvement in the students' average score on the*  
6        *State's assessments in science for the school year for*  
7        *which the grant is awarded, as compared to the school*  
8        *year preceding the school year for which the grant is*  
9        *awarded.*

10        (b) *GRANT AMOUNT.—The amount of each grant*  
11        *awarded under this section shall be \$50,000.*

12        **SEC. 3502. AUTHORIZATION OF APPROPRIATIONS.**

13        *There are authorized to be appropriated to carry out*  
14        *this section such sums for fiscal years 2008 through 2011.*

15        ***DIVISION D—NATIONAL SCIENCE***  
16        ***FOUNDATION***

17        **SEC. 4001. AUTHORIZATION OF APPROPRIATIONS.**

18        (a) *IN GENERAL.—There are authorized to be appro-*  
19        *priated to the National Science Foundation—*

20                (1) *\$6,729,000,000 for fiscal year 2008;*

21                (2) *\$7,738,000,000 for fiscal year 2009;*

22                (3) *\$8,899,000,000 for fiscal year 2010; and*

23                (4) *\$10,234,000,000 for fiscal year 2011.*

24        (b) *PLAN FOR INCREASED RESEARCH.—*

1           (1) *IN GENERAL.*—Not later than 180 days after  
2           the date of the enactment of this Act, the Director of  
3           the National Science Foundation, in consultation  
4           with the National Science Board, shall submit a com-  
5           prehensive, multiyear plan that describes how the  
6           funds authorized in subsection (a) would be used, if  
7           appropriated, to the Committee on Commerce,  
8           Science, and Transportation of the Senate, the Com-  
9           mittee on Health, Education, Labor, and Pensions of  
10          the Senate, and the Committee on Science of the  
11          House of Representatives.

12           (2) *PLAN REQUIREMENTS.*—The Director shall—

13           (A) develop the plan with a focus on  
14           strengthening the Nation’s lead in physical  
15           science and technology, increasing overall work-  
16           force skills in physical science, technology, engi-  
17           neering, and mathematics at all levels, and  
18           strengthening innovation by expanding the focus  
19           of competitiveness and innovation policy at the  
20           regional and local level; and

21           (B) emphasize spending increased research  
22           funds appropriated pursuant to subsection (a) in  
23           areas of investment for Federal research and  
24           technology programs identified under section  
25           1101(c) of this Act.

1 **SEC. 4002. STRENGTHENING OF EDUCATION AND HUMAN**  
2 **RESOURCES DIRECTORATE THROUGH EQUI-**  
3 **TABLE DISTRIBUTION OF NEW FUNDS.**

4 (a) *PURPOSE.*—*The purpose of this section is to ensure*  
5 *the continued involvement of experts at the National*  
6 *Science Foundation in improving science, technology, engi-*  
7 *neering, and mathematics education at the elementary, sec-*  
8 *ondary, and postsecondary school levels by providing an-*  
9 *nual funding increases for the education and human re-*  
10 *sources programs of the National Science Foundation that*  
11 *are proportional to the funding increases provided to the*  
12 *Foundation overall.*

13 (b) *EQUITABLE DISTRIBUTION OF NEW FUNDS.*—  
14 *Within the amounts authorized to be appropriated by sec-*  
15 *tion 4001, there are authorized to be appropriated for the*  
16 *education and human resources programs of the National*  
17 *Science Foundation, for fiscal year 2008, \$1,050,000,000,*  
18 *and, for each of the fiscal years 2009 through 2011, an*  
19 *amount equal to \$1,050,000,000 increased for each such fis-*  
20 *cal year by an amount equal to the percentage increase in*  
21 *the appropriation for the National Science Foundation for*  
22 *such fiscal year above the amount appropriated to the Na-*  
23 *tional Science Foundation for fiscal year 2008.*

24 **SEC. 4003. GRADUATE FELLOWSHIPS AND GRADUATE**  
25 **TRAINEESHIPS.**

26 (a) *GRADUATE RESEARCH FELLOWSHIP PROGRAM.*—

1           (1) *IN GENERAL.*—During the 4-year period be-  
2           ginning on the date of the enactment of this Act, the  
3           Director of the National Science Foundation shall ex-  
4           pand the Graduate Research Fellowship Program of  
5           the National Science Foundation so that an addi-  
6           tional 1,250 fellowships are awarded to citizens or  
7           nationals of the United States or eligible lawful per-  
8           manent residents under the Program during that pe-  
9           riod.

10           (2) *EXTENSION OF FELLOWSHIP PERIOD.*—The  
11           Director is authorized to award fellowships under the  
12           Graduate Research Fellowship Program for a period  
13           of up to 5 years.

14           (3) *AUTHORIZATION OF APPROPRIATIONS.*—  
15           Within the amounts authorized to be appropriated by  
16           section 4001, there are authorized to be appropriated,  
17           to provide additional fellowships under the Graduate  
18           Research Fellowship Program during each of the fis-  
19           cal years 2008 through 2011, the following:

20                   (A) \$24,000,000 for fiscal year 2008.

21                   (B) \$36,000,000 for fiscal year 2009.

22                   (C) \$48,000,000 for fiscal year 2010.

23                   (D) \$60,000,000 for fiscal year 2011.

24           (b) *INTEGRATIVE GRADUATE EDUCATION AND RE-*  
25           *SEARCH TRAINEESHIP PROGRAM.*—

1           (1) *IN GENERAL.*—During the 4-year period be-  
 2           ginning on the date of the enactment of this Act, the  
 3           Director shall expand the Integrative Graduate Edu-  
 4           cation and Research Traineeship program of the Na-  
 5           tional Science Foundation so that an additional  
 6           1,250 individuals who are citizens or nationals of the  
 7           United States or eligible lawful permanent residents  
 8           are awarded grants under the program during that  
 9           period.

10           (2) *AUTHORIZATION OF APPROPRIATIONS.*—  
 11           Within the amounts authorized to be appropriated by  
 12           section 4001, there are authorized to be appropriated,  
 13           to provide grants to additional individuals under the  
 14           Integrative Graduate Education and Research  
 15           Traineeship program during each of the fiscal years  
 16           2008 through 2011, the following:

17                   (A) \$22,000,000 for fiscal year 2008.

18                   (B) \$33,000,000 for fiscal year 2009.

19                   (C) \$44,000,000 for fiscal year 2010.

20                   (D) \$55,000,000 for fiscal year 2011.

21           (c) *DEFINITION OF ELIGIBLE LAWFUL PERMANENT*  
 22           *RESIDENT.*—In this section, the term “eligible lawful per-  
 23           manent resident” means a lawful permanent resident of the  
 24           United States who declares an intent—

25                   (1) to apply for United States citizenship; or

1           (2) *to reside in the United States for not less*  
2           *than 5 years after the completion of a graduate fel-*  
3           *lowship or traineeship awarded under this section.*

4 **SEC. 4004. PROFESSIONAL SCIENCE MASTER'S DEGREE**  
5           **PROGRAMS.**

6           (a) *CLEARINGHOUSE.—*

7           (1) *DEVELOPMENT.—The Director of the Na-*  
8           *tional Science Foundation shall establish a clearing-*  
9           *house, in collaboration with 4-year institutions of*  
10          *higher education (including applicable graduate*  
11          *schools and academic departments), and industries*  
12          *and Federal agencies that employ science-trained per-*  
13          *sonnel, to share program elements used in successful*  
14          *professional science master's degree programs and*  
15          *other advanced degree programs related to science,*  
16          *mathematics, technology, and engineering.*

17          (2) *AVAILABILITY.—The Director shall make the*  
18          *clearinghouse of program elements developed under*  
19          *paragraph (1) available to institutions of higher edu-*  
20          *cation that are developing professional science mas-*  
21          *ter's degree programs.*

22          (b) *PROGRAMS.—*

23          (1) *PROGRAMS AUTHORIZED.—The Director*  
24          *shall award grants to 4-year institutions of higher*  
25          *education to facilitate the institutions' creation or*

1 *improvement of professional science master's degree*  
2 *programs.*

3 (2) *APPLICATION.—A 4-year institution of high-*  
4 *er education desiring a grant under this section shall*  
5 *submit an application at such time, in such manner,*  
6 *and accompanied by such information as the Director*  
7 *may require. The application shall include—*

8 (A) *a description of the professional science*  
9 *master's degree program that the institution of*  
10 *higher education will implement;*

11 (B) *the amount of funding from non-Fed-*  
12 *eral sources, including from private industries,*  
13 *that the institution of higher education shall use*  
14 *to support the professional science master's de-*  
15 *gree program; and*

16 (C) *an assurance that the institution of*  
17 *higher education shall encourage students in the*  
18 *professional science master's degree program to*  
19 *apply for all forms of Federal assistance avail-*  
20 *able to such students, including applicable grad-*  
21 *uate fellowships and student financial assistance*  
22 *under titles IV and VII of the Higher Education*  
23 *Act of 1965 (20 U.S.C. 1070 et seq., 1133 et*  
24 *seq.).*

1           (3) *PREFERENCES.*—*The Director shall give*  
2 *preference in making awards to 4-year institutions of*  
3 *higher education seeking Federal funding to create or*  
4 *improve professional science master's degree pro-*  
5 *grams, to those applicants—*

6           (A) *located in States with low percentages*  
7 *of citizens with graduate or professional degrees,*  
8 *as determined by the Bureau of the Census, that*  
9 *demonstrate success in meeting the unique needs*  
10 *of the corporate, non-profit, and government*  
11 *communities in the State, as evidenced by pro-*  
12 *viding internships for professional science mas-*  
13 *ter's degree students or similar partnership ar-*  
14 *rangements; or*

15           (B) *that secure more than  $\frac{2}{3}$  of the funding*  
16 *for such professional science master's degree pro-*  
17 *grams from sources other than the Federal Gov-*  
18 *ernment.*

19           (4) *NUMBER OF GRANTS; TIME PERIOD OF*  
20 *GRANTS.—*

21           (A) *NUMBER OF GRANTS.*—*Subject to the*  
22 *availability of appropriated funds, the Director*  
23 *shall award grants under paragraph (1) to a*  
24 *maximum of 200 4-year institutions of higher*  
25 *education.*

1           (B) *TIME PERIOD OF GRANTS.*—Grants  
2           awarded under this section shall be for one 3-  
3           year term. Grants may be renewed only once for  
4           a maximum of 2 additional years.

5           (5) *EVALUATION AND REPORTS.*—

6           (A) *DEVELOPMENT OF PERFORMANCE*  
7           *BENCHMARKS.*—Prior to the start of the grant  
8           program, the Director of the National Science  
9           Foundation, in collaboration with 4-year insti-  
10          tutions of higher education (including applicable  
11          graduate schools and academic departments),  
12          and industries and Federal agencies that employ  
13          science-trained personnel, shall develop perform-  
14          ance benchmarks to evaluate the pilot programs  
15          assisted by grants under this section.

16          (B) *EVALUATION.*—For each year of the  
17          grant period, the Director, in consultation with  
18          4-year institutions of higher education (includ-  
19          ing applicable graduate schools and academic de-  
20          partments), and industries and Federal agencies  
21          that employ science-trained personnel, shall com-  
22          plete an evaluation of each program assisted by  
23          grants under this section. Any program that  
24          fails to satisfy the performance benchmarks de-

1            *veloped under subparagraph (A) shall not be eli-*  
2            *gible for further funding.*

3            (C) *REPORT.*—*Not later than 180 days*  
4            *after the completion of an evaluation described*  
5            *in subparagraph (B), the Director shall submit*  
6            *a report to Congress that includes—*

7                    (i) *the results of the evaluation de-*  
8                    *scribed in subparagraph (B); and*

9                    (ii) *recommendations for administra-*  
10                   *tive and legislative action that could opti-*  
11                   *mize the effectiveness of the pilot programs,*  
12                   *as the Director determines to be appro-*  
13                   *priate.*

14            (c) *INSTITUTION OF HIGHER EDUCATION DEFINED.*—  
15            *In this section, the term “institution of higher education”*  
16            *has the meaning given that term in section 101(a) of the*  
17            *Higher Education Act of 1965 (20 U.S.C. 1001(a)).*

18            (d) *AUTHORIZATION OF APPROPRIATIONS.*—*Within*  
19            *the amounts authorized to be appropriated by section 4001,*  
20            *there are authorized to be appropriated to carry out this*  
21            *section—*

22                    (1) *\$15,000,000 for fiscal year 2008;*

23                    (2) *\$18,000,000 for fiscal year 2009; and*

24                    (3) *\$20,000,000 for each of the fiscal years 2010*  
25            *and 2011.*

1 **SEC. 4005. INCREASED SUPPORT FOR SCIENCE EDUCATION**  
2 **THROUGH THE NATIONAL SCIENCE FOUNDA-**  
3 **TION.**

4 (a) *IN GENERAL.*—*Within the amounts authorized to*  
5 *be appropriated by section 4001, there are authorized to be*  
6 *appropriated to carry out the science, mathematics, engi-*  
7 *neering, and technology talent expansion program under*  
8 *section 8(7) of the National Science Foundation Authoriza-*  
9 *tion Act of 2002 (Public Law 107–368, 116 Stat. 3042)—*

10 (1) \$40,000,000 for fiscal year 2008;

11 (2) \$45,000,000 for fiscal year 2009;

12 (3) \$50,000,000 for fiscal year 2010; and

13 (4) \$55,000,000 for fiscal year 2011.

14 (b) *PROMOTING OUTREACH AND HIGH QUALITY.*—  
15 *Section 8(7)(C) of the National Science Foundation Author-*  
16 *ization Act of 2002 (Public Law 107–368, 116 Stat. 3042)*  
17 *is amended—*

18 (1) *by redesignating clauses (i) through (vi) as*  
19 *subclauses (I) through (VI), respectively, and indent-*  
20 *ing appropriately;*

21 (2) *by striking “include those that promote high*  
22 *quality—” and inserting “include programs that—*

23 *“(i) promote high-quality—”;*

24 (3) *in clause (i) (as inserted by paragraph*  
25 *(2))—*

1           (A) in subclause (III) (as redesignated by  
2 paragraph (1)), by striking “for students;” and  
3 inserting “for students, especially underrep-  
4 resented minority and female mathematics,  
5 science, engineering, and technology students;”;

6           (B) in subclause (V) (as redesignated by  
7 paragraph (1)), by striking “and” after the  
8 semicolon;

9           (C) in subclause (VI) (as redesignated by  
10 paragraph (1)), by striking “students.” and in-  
11 serting “students; and”; and

12           (D) by adding at the end the following:

13           “(VII) outreach programs that provide  
14 middle and secondary school students and  
15 their science, technology, and math teachers  
16 opportunities to increase the students’ and  
17 teachers’ exposure to engineering and tech-  
18 nology;”; and

19           (4) by adding at the end the following:

20           “(ii) finance summer internships for mathe-  
21 matics, science, engineering, and technology un-  
22 dergraduate students;

23           “(iii) facilitate the hiring of additional  
24 mathematics, science, engineering, and tech-  
25 nology faculty; and

1           “(iv) serve as bridges to enable underrep-  
2           resented minority and female secondary school  
3           students to obtain extra mathematics, science,  
4           engineering, and technology training prior to en-  
5           tering an institution of higher education.”.

6 **SEC. 4006. MEETING CRITICAL NATIONAL SCIENCE NEEDS.**

7           (a) *IN GENERAL.*—In addition to any other criteria,  
8           the Director of the National Science Foundation shall in-  
9           clude consideration of the degree to which awards and re-  
10          search activities that otherwise qualify for support by the  
11          National Science Foundation may assist in meeting critical  
12          national needs in innovation, competitiveness, the physical  
13          and natural sciences, technology, engineering, and mathe-  
14          matics.

15          (b) *PRIORITY TREATMENT.*—The Director shall give  
16          priority in the selection of awards and the allocation of Na-  
17          tional Science Foundation resources to proposed research  
18          activities, and grants funded under the National Science  
19          Foundation’s Research and Related Activities Account, that  
20          can be expected to make contributions in physical or nat-  
21          ural science, technology, engineering, or mathematics, or  
22          that enhance competitiveness or innovation in the United  
23          States.

24          (c) *LIMITATION.*—Nothing in this section shall be con-  
25          strued to inhibit the grant selection process for funding

1 *other areas of research deemed by the National Science*  
2 *Foundation to be consistent with its mandate nor to change*  
3 *the core mission of the National Science Foundation.*

4 **SEC. 4007. REAFFIRMATION OF THE MERIT-REVIEW PROC-**  
5 **ESS OF THE NATIONAL SCIENCE FOUNDA-**  
6 **TION.**

7 *Nothing in this division or division A, or the amend-*  
8 *ments made by this division or division A, shall be inter-*  
9 *preted to require or recommend that the National Science*  
10 *Foundation—*

11 *(1) alter or modify its merit-review system or*  
12 *peer-review process; or*

13 *(2) exclude the awarding of any proposal by*  
14 *means of the merit-review or peer-review process.*

15 **SEC. 4008. EXPERIMENTAL PROGRAM TO STIMULATE COM-**  
16 **PETITIVE RESEARCH.**

17 *Within the amounts authorized to be appropriated by*  
18 *section 4001, there are authorized to be appropriated to the*  
19 *National Science Foundation for the Experimental Pro-*  
20 *gram to Stimulate Competitive Research authorized under*  
21 *section 113 of the National Science Foundation Authoriza-*  
22 *tion Act of 1988 (42 U.S.C. 1862g), for fiscal year 2008,*  
23 *\$125,000,000, and, for each of fiscal years 2009 through*  
24 *2011, an amount equal to \$125,000,000 increased for each*  
25 *such year by an amount equal to the percentage increase*

1 *in the appropriation for the National Science Foundation*  
2 *for such fiscal year above the total amount appropriated*  
3 *to the National Science Foundation for fiscal year 2008.*

4 **SEC. 4009. ENCOURAGING PARTICIPATION.**

5 (a) *MENTORING PROGRAM.*—*The Director of the Na-*  
6 *tional Science Foundation shall establish a program to re-*  
7 *cruit and provide mentors for women who are interested*  
8 *in careers in science, technology, engineering, and mathe-*  
9 *matics by pairing such women who are in science, tech-*  
10 *nology, engineering, or mathematics programs of study in*  
11 *secondary school, community college, undergraduate or*  
12 *graduate school with mentors who are working in industry.*

13 (b) *ADDITIONAL LEARNING PROGRAM.*—*The Director*  
14 *shall also establish a program to provide grants to commu-*  
15 *nity colleges to provide additional learning and other ap-*  
16 *propriate training to allow women to enter higher-paying*  
17 *technical jobs in fields related to science, technology, engi-*  
18 *neering, or mathematics.*

19 (c) *APPLICATIONS.*—*An institution of higher edu-*  
20 *cation, including a community college, desiring a grant*  
21 *under this section shall submit an application at such time,*  
22 *in such manner, and accompanied by such information as*  
23 *the Director may require.*

24 (d) *PROGRAM EVALUATION.*—*The Director shall estab-*  
25 *lish metrics to evaluate the success of the programs estab-*

1 lished under subsections (a) and (b) annually and report  
 2 the findings and conclusions of the evaluations annually to  
 3 Congress.

4 **SEC. 4010. CYBERINFRASTRUCTURE.**

5 *In order to continue and expand efforts to ensure that*  
 6 *research institutions throughout the Nation can fully par-*  
 7 *ticipate in research programs of the National Science Foun-*  
 8 *dation and collaborate with colleagues throughout the na-*  
 9 *tion, the Director of the National Science Foundation, with-*  
 10 *in 180 days after the date of enactment of this Act, shall*  
 11 *develop and publish a plan that describes the current status*  
 12 *of broadband access for scientific research purposes in*  
 13 *States located in EPSCoR-eligible jurisdictions and out-*  
 14 *lines actions which can be taken to ensure that such connec-*  
 15 *tions are available to enable participation in those National*  
 16 *Science Foundation programs which rely heavily on high-*  
 17 *speed networking and collaborations across institutions and*  
 18 *regions.*

19 **SEC. 4011. FEDERAL INFORMATION AND COMMUNICATIONS**  
 20 **TECHNOLOGY RESEARCH.**

21 *(a) ADVANCED INFORMATION AND COMMUNICATIONS*  
 22 *TECHNOLOGY RESEARCH.—*

23 *(1) NATIONAL SCIENCE FOUNDATION INFORMA-*  
 24 *TION AND COMMUNICATIONS TECHNOLOGY RE-*  
 25 *SEARCH.—The Director of the National Science Foun-*

1 *dation shall establish a program of basic research in*  
2 *advanced information and communications tech-*  
3 *nologies focused on enhancing or facilitating the*  
4 *availability and affordability of advanced commu-*  
5 *nications services to all people of the United States.*  
6 *In developing and carrying out the program, the Di-*  
7 *rector shall consult with the Board established under*  
8 *paragraph (2).*

9 (2) *FEDERAL ADVANCED INFORMATION AND COM-*  
10 *MUNICATIONS TECHNOLOGY RESEARCH BOARD.—*  
11 *There is established within the National Science*  
12 *Foundation a Federal Advanced Information and*  
13 *Communications Technology Research Board (referred*  
14 *to in this subsection as “the Board”) which shall ad-*  
15 *vice the Director of the National Science Foundation*  
16 *in carrying out the program authorized under para-*  
17 *graph (1). The Board shall be composed of individ-*  
18 *uals with expertise in information and communica-*  
19 *tions technologies, including representatives from the*  
20 *National Telecommunications and Information Ad-*  
21 *ministration, the Federal Communications Commis-*  
22 *sion, the National Institute of Standards and Tech-*  
23 *nology, and the Department of Defense, and rep-*  
24 *resentatives from industry and educational institu-*  
25 *tions.*

1           (3) *GRANT PROGRAM.*—*The Director of the Na-*  
2           *tional Science Foundation, in consultation with the*  
3           *Board, shall award grants for basic research into ad-*  
4           *vanced information and communications technologies*  
5           *that will contribute to enhancing or facilitating the*  
6           *availability and affordability of advanced commu-*  
7           *nications services to all people of the United States.*  
8           *Areas of research to be supported through the grants*  
9           *include—*

10                   (A) *affordable broadband access, including*  
11                   *wireless technologies;*

12                   (B) *network security and reliability;*

13                   (C) *communications interoperability;*

14                   (D) *networking protocols and architectures,*  
15                   *including resilience to outages or attacks;*

16                   (E) *trusted software;*

17                   (F) *privacy;*

18                   (G) *nanoelectronics for communications ap-*  
19                   *plications;*

20                   (H) *low-power communications electronics;*

21                   (I) *implementation of equitable access to*  
22                   *national advanced fiber optic research and edu-*  
23                   *cational networks in noncontiguous States; and*

1           *(J) such other related areas as the Director,*  
2           *in consultation with the Board, finds appro-*  
3           *priate.*

4           (4) *CENTERS.—The Director shall award*  
5           *multiyear grants, subject to the availability of appro-*  
6           *priations, to institutions of higher education (as de-*  
7           *defined in section 101(a) of the Higher Education Act*  
8           *of 1965 (20 U.S.C. 1001(a)), nonprofit research insti-*  
9           *tutions affiliated with institutions of higher edu-*  
10           *cation, or consortia thereof to establish multidisci-*  
11           *plinary Centers for Communications Research. The*  
12           *purpose of the Centers shall be to generate innovative*  
13           *approaches to problems in communications and infor-*  
14           *mation technology research, including the research*  
15           *areas described in paragraph (3). Institutions of*  
16           *higher education, nonprofit research institutions af-*  
17           *iliated with institutions of higher education, or con-*  
18           *sortia receiving such grants may partner with 1 or*  
19           *more government laboratories or for-profit entities, or*  
20           *other institutions of higher education or nonprofit re-*  
21           *search institutions.*

22           (5) *APPLICATIONS.—The Director of the Na-*  
23           *tional Science Foundation, in consultation with the*  
24           *Board, shall establish criteria for the award of grants*  
25           *under paragraphs (3) and (4). Such grants shall be*

1       *awarded under the programs on a merit-reviewed*  
2       *competitive basis. The Director shall give priority to*  
3       *grants that offer the potential for revolutionary rather*  
4       *than evolutionary breakthroughs.*

5               (6) *AUTHORIZATION OF APPROPRIATIONS.—*  
6       *Within the amounts authorized to be appropriated by*  
7       *section 4001, there are authorized to be appropriated*  
8       *to the National Science Foundation to carry out this*  
9       *subsection—*

10                       (A) *\$45,000,000 for fiscal year 2008;*

11                       (B) *\$50,000,000 for fiscal year 2009;*

12                       (C) *\$55,000,000 for fiscal year 2010; and*

13                       (D) *\$60,000,000 for fiscal year 2011.*

14               (b) *NATIONAL INSTITUTE OF STANDARDS AND TECH-*  
15 *NOLOGY RESPONSIBILITIES.—The Director of the National*  
16 *Institute of Standards and Technology shall continue to*  
17 *support research and support standards development in ad-*  
18 *vanced information and communications technologies fo-*  
19 *cused on enhancing or facilitating the availability and af-*  
20 *fordability of advanced communications services to all peo-*  
21 *ple of the United States, in order to implement the Insti-*  
22 *tute's responsibilities under section 2(c)(12) of the National*  
23 *Institute of Standards and Technology Act (15 U.S.C.*  
24 *272(c)(12)). The Director shall support intramural research*  
25 *and cooperative research with institutions of higher edu-*

1 *cation (as defined in section 101(a) of the Higher Edu-*  
 2 *cation Act of 1965 (20 U.S.C. 1001(a)) and industry.*

3 **SEC. 4012. ROBERT NOYCE TEACHER PROGRAM.**

4 (a) *IN GENERAL.*—Section 10 of the National Science  
 5 *Foundation Authorization Act of 2002 (42 U.S.C. 1862n-*  
 6 *1) is amended—*

7 (1) *in the section heading, by striking “SCHOL-*  
 8 *ARSHIP” and inserting “TEACHER”;*

9 (2) *in subsection (a)—*

10 (A) *in paragraph (1)—*

11 (i) *by striking “(or consortia of such*  
 12 *institutions)” and inserting “, consortia of*  
 13 *such institutions, or partnerships”;*

14 (ii) *by striking “to provide scholar-*  
 15 *ships, stipends, and programming de-*  
 16 *signed”;*

17 (iii) *by inserting “and to provide*  
 18 *scholarships, stipends, or fellowships to in-*  
 19 *dividuals participating in the program”*  
 20 *after “science teachers”; and*

21 (iv) *by striking “Scholarship” and in-*  
 22 *serting “Teacher”;*

23 (B) *in paragraph (3)—*

1           (i) *in the matter preceding subpara-*  
2 *graph (A), by striking “or consortia” and*  
3 *inserting “consortia, or partnerships”;*

4           (ii) *in subparagraph (A)—*

5           (I) *in the matter preceding clause*

6           (i)—

7           (aa) *by striking “encourage*  
8 *top college juniors and seniors*  
9 *majoring in” and inserting “re-*  
10 *cruit and prepare undergraduate*  
11 *students to pursue degrees in”;*  
12 *and*

13           (bb) *by striking “to become”*  
14 *and inserting “and become quali-*  
15 *fied as”;*

16           (II) *in clause (ii)—*

17           (aa) *by striking “programs*  
18 *to help scholarship recipients”*  
19 *and inserting “academic courses*  
20 *and clinical teaching experiences*  
21 *designed to prepare students par-*  
22 *ticipating in the program”;*

23           (bb) *by striking “programs*  
24 *that will result in” and inserting*

1           *“such preparation as is necessary*  
2           *to meet requirements for”*; and

3                     *(cc) by striking “licensing;*  
4                     *and” and inserting “licensing;”*;  
5           *(III) in clause (iii)—*

6                     *(aa) by striking “scholarship*  
7                     *recipients” and inserting “stu-*  
8                     *dents participating in the pro-*  
9                     *gram”*;

10                    *(bb) by striking “enable the*  
11                    *recipients” and inserting “enable*  
12                    *the students”*; and

13                    *(cc) by striking “; or” and*  
14                    *inserting “; and”*; and

15                    *(IV) by adding at the end the fol-*  
16                    *lowing:*

17                    *“(iv) providing summer internships for*  
18                    *freshman and sophomore students partici-*  
19                    *pating in the program;”*;

20                    *(iii) in subparagraph (B)—*

21                    *(I) in the matter preceding clause*

22                    *(i)—*

23                    *(aa) by striking “encourage”*  
24                    *and inserting “recruit and pre-*  
25                    *pare”*; and

1                   (bb) by inserting “qualified  
2                   as” after “to become”;

3                   (II) by striking clause (i) and in-  
4                   serting the following:

5                   “(i) offering academic courses and  
6                   clinical teaching experiences designed to  
7                   prepare stipend recipients to teach in ele-  
8                   mentary schools and secondary schools, in-  
9                   cluding such preparation as is necessary to  
10                  meet requirements for teacher certification  
11                  or licensing; and”;

12                  (III) in clause (iii), by striking  
13                  the period at the end and inserting “;  
14                  or”;

15                  (iv) by adding at the end the following:

16                  “(C) to develop and implement a program  
17                  to recruit and prepare mathematics, science, or  
18                  engineering professionals to become NSF Teach-  
19                  ing Fellows, and to recruit existing teachers to  
20                  become NSF Master Teaching Fellows, through—

21                  “(i) administering fellowships in ac-  
22                  cordance with subsection (e);

23                  “(ii) offering academic courses and  
24                  clinical teaching experiences that are de-  
25                  signed to prepare students participating in

1           *the program to teach in secondary schools*  
2           *and that, in the case of NSF Teaching Fel-*  
3           *lows, result in a master's degree in teaching*  
4           *and teacher certification or licensing; and*

5           *“(iii) offering programs to partici-*  
6           *pants to assist in the fulfillment of the par-*  
7           *ticipants' responsibilities under this section,*  
8           *including mentoring, training, mentoring*  
9           *training, and induction and professional*  
10          *development programs.”; and*

11          *(C) by adding at the end the following:*

12           *“(4) ELIGIBILITY REQUIREMENT.—To be eligible*  
13          *for an award under this section, an institution of*  
14          *higher education, a consortium of such institutions,*  
15          *or a partnership shall ensure that specific faculty*  
16          *members and staff from the mathematics, science, or*  
17          *engineering department of the institution (or a par-*  
18          *ticipating institution of the consortium or partner-*  
19          *ship) and specific education faculty members of the*  
20          *institution (or such participating institution) are*  
21          *designated to carry out the development and imple-*  
22          *mentation of the program. An institution of higher*  
23          *education and consortium may also include teachers*  
24          *to participate in developing the pedagogical content of*  
25          *the program and to supervise students participating*

1     *in the program in the students' field teaching experi-*  
2     *ences. No institution of higher education, consortium,*  
3     *or partnership shall be eligible for an award unless*  
4     *faculty from the mathematics, science, or engineering*  
5     *department of the institution (or such participating*  
6     *institution) are active participants in the program.*

7             “(5) *MATCHING REQUIREMENT.*—*An institution*  
8     *of higher education, consortium of institutions of*  
9     *higher education, or partnership receiving a grant*  
10    *under this section shall provide, from non-Federal*  
11    *sources, an amount equal to 50 percent of the amount*  
12    *of the grant (which may be provided in cash or in-*  
13    *kind) to carry out the activities supported by the*  
14    *grant.*

15            “(6) *SUPPLEMENT, NOT SUPPLANT.*—*Grant*  
16    *funds provided under this section shall be used to sup-*  
17    *plement, and not supplant, other Federal or State*  
18    *funds available for the type of activities supported by*  
19    *the grant.”;*

20            (3) *in subsection (b)—*

21                (A) *in paragraph (1)—*

22                    (i) *in the matter preceding subpara-*  
23                    *graph (A), by striking “or consortium” and*  
24                    *inserting “consortium, or partnership”;*

1                   (ii) by striking subparagraph (A) and  
2                   inserting the following:

3                   “(A) a description of the program that the  
4                   applicant intends to operate, including—

5                   “(i) the number of scholarships and  
6                   summer internships or the size and number  
7                   of stipends or fellowships the applicant in-  
8                   tends to award;

9                   “(ii) the type of activities proposed for  
10                  the recruitment of students to the program;  
11                  and

12                  “(iii) the selection process that will be  
13                  used in awarding the scholarships, stipends,  
14                  or fellowships;”;

15                  (iii) in subparagraph (B)—

16                         (I) by striking “scholarship or sti-  
17                         pend”; and

18                         (II) by striking “; and” and in-  
19                         serting “, which may include a de-  
20                         scription of any existing programs at  
21                         the applicant’s institution that are tar-  
22                         geted to the education of mathematics  
23                         and science teachers and the number of  
24                         teachers graduated annually from such  
25                         programs;”; and

1                   *(iv) by striking subparagraph (C) and*  
2                   *inserting the following:*

3                   *“(C) a description of the academic courses*  
4                   *and clinical teaching experiences required under*  
5                   *subparagraph (A)(ii), (B)(ii), or (C)(ii) of sub-*  
6                   *section (a)(3), as applicable, including—*

7                   *“(i)(I) a description of the under-*  
8                   *graduate program under subsection*  
9                   *(a)(3)(A)(ii) that will enable a student to*  
10                  *graduate in 4 years with a major in mathe-*  
11                  *matics, science, or engineering and to ob-*  
12                  *tain teacher certification or licensing; or*

13                  *“(II) a description of the master’s de-*  
14                  *gree programs offered under subsection*  
15                  *(a)(3)(C)(ii);*

16                  *“(ii) a description of clinical teaching*  
17                  *experiences proposed; and*

18                  *“(iii) evidence of agreements between*  
19                  *the applicant and the schools or school dis-*  
20                  *tricts that are identified as the locations at*  
21                  *which clinical teaching experiences will*  
22                  *occur;*

23                  *“(D) a description of the programs required*  
24                  *under subparagraph (A)(iii), (B)(iii), or (C)(iii)*  
25                  *of subsection (a)(3), as applicable, including ac-*

1            *tivities to assist new teachers in fulfilling their*  
2            *service requirements under this section; and*

3            *“(E) an identification of the applicant’s*  
4            *mathematics, science, or engineering faculty and*  
5            *its education faculty who will carry out the de-*  
6            *velopment and implementation of the program*  
7            *as required under subsection (a)(4).”;* and

8            *(B) in paragraph (2)—*

9            *(i) by redesignating subparagraphs (B)*  
10           *through (E) as subparagraphs (C) through*  
11           *(F), respectively;*

12           *(ii) by inserting after subparagraph*  
13           *(A) the following:*

14           *“(B) the extent to which the applicant’s*  
15           *mathematics, science, or engineering faculty and*  
16           *its education faculty have worked or will work*  
17           *collaboratively to design new or revised curricula*  
18           *that recognize the specialized pedagogy required*  
19           *to teach mathematics and science effectively in*  
20           *elementary schools and secondary schools;”;* and

21           *(iii) in subparagraph (D) (as redesign-*  
22           *ated by clause (i)), by striking “or sti-*  
23           *pend” and inserting “, stipend, or fellow-*  
24           *ship”;*

25           *(4) in subsection (c)—*

1           (A) in paragraph (3)—

2                   (i) by striking “\$7,500” and inserting  
3           “\$10,000”; and

4                   (ii) by striking “of scholarship sup-  
5           port” and inserting “of scholarship support,  
6           unless the Director establishes a policy by  
7           which part-time students may receive addi-  
8           tional years of support”; and

9           (B) in paragraph (4), by inserting “with a  
10           maximum service requirement of 4 years” after  
11           “scholarship was received”;

12           (5) in subsection (d)—

13                   (A) by striking paragraph (1) and inserting  
14           the following:

15                   “(1) *IN GENERAL.*—Stipends under this section  
16           shall be available only to—

17                           “(A) teachers enrolled in a master’s degree  
18                   program in science, technology, engineering, or  
19                   mathematics; and

20                           “(B) mathematics, science, or engineering  
21                   professionals who, while receiving the stipend,  
22                   are enrolled in a program to receive certification  
23                   or licensing to teach.”;

24                   (B) in paragraph (3), by inserting “, except  
25           that if an individual is enrolled in a part-time

1           *program, such stipend shall be prorated accord-*  
2           *ing to the length of the program” after “stipend*  
3           *support”; and*

4           (C) *in paragraph (4), by striking “for each*  
5           *year a stipend was received”;*

6           (6) *by redesignating subsections (e) through (h)*  
7           *and subsection (i) as subsections (f) through (i) and*  
8           *subsection (l), respectively;*

9           (7) *by inserting after subsection (d) the fol-*  
10          *lowing:*

11          “(e) *NATIONAL SCIENCE FOUNDATION TEACHING FEL-*  
12          *LOWSHIPS.—*

13                 “(1) *PURPOSE.—The purpose of the fellowships*  
14                 *under this subsection is to promote and recognize*  
15                 *high-level achievement in advanced mathematics and*  
16                 *science teaching.*

17                 “(2) *PARTNERSHIP REQUIREMENTS.—In order to*  
18                 *receive a grant under this section to carry out this*  
19                 *subsection, the recipient of such grant shall be a part-*  
20                 *nership and the only local educational agencies that*  
21                 *shall be members of the partnership shall be local edu-*  
22                 *cational agencies that agree not to reduce the base sal-*  
23                 *ary normally paid to an individual solely because*  
24                 *such individual receives a salary supplement under*  
25                 *this subsection.*

1           “(3) *GENERAL CRITERIA.*—*A partnership receiv-*  
2           *ing a grant to carry out a fellowship program under*  
3           *this subsection shall award such fellowships only to—*

4                   “(A) *mathematics, science, or engineering*  
5                   *professionals who enroll in 1-year master’s de-*  
6                   *gree programs in teaching that result in teacher*  
7                   *certification or licensing and who shall be re-*  
8                   *ferred to as ‘NSF Teaching Fellows’; and*

9                   “(B) *mathematics and science teachers who*  
10                  *possess a master’s degree in their field and who*  
11                  *shall be referred to as ‘NSF Master Teaching*  
12                  *Fellows’.*

13           “(4) *SELECTION.*—*Individuals shall be selected*  
14           *to receive fellowships under this section primarily on*  
15           *the basis of—*

16                   “(A) *professional achievement;*

17                   “(B) *academic merit;*

18                   “(C) *demonstrated advanced content knowl-*  
19                   *edge; and*

20                   “(D) *in the case of NSF Master Teaching*  
21                   *Fellows, demonstrated success in improving stu-*  
22                   *dent academic achievement in mathematics,*  
23                   *science, technology, or engineering.*

1           “(5) *USE OF FUNDS.*—*Each partnership receiving*  
2 *ing a grant under this section to award fellowships*  
3 *under this subsection shall—*

4           “(A) *provide a stipend to each NSF Teach-*  
5 *ing Fellow for the duration of the Fellow’s enroll-*  
6 *ment in the master’s degree program, to be used*  
7 *to offset the cost of tuition, fees, and living ex-*  
8 *penses; and*

9           “(B) *provide salary supplements to each*  
10 *NSF Teaching Fellow and NSF Master Teaching*  
11 *Fellow during the period of the Fellow’s service*  
12 *obligation under paragraph (4).*

13           “(6) *SERVICE OBLIGATION.*—*If an individual is*  
14 *awarded a fellowship under this subsection, that indi-*  
15 *vidual shall be required to serve in a high-need local*  
16 *educational agency for—*

17           “(A) *in the case of a NSF Teaching Fellow,*  
18 *4 years; and*

19           “(B) *in the case of a NSF Master Teaching*  
20 *Fellow, 5 years.*

21           “(7) *DUTIES.*—*A recipient of a fellowship under*  
22 *this section, during the service obligation required*  
23 *under paragraph (6) and in addition to regular class-*  
24 *room activities, shall take on a leadership role within*  
25 *the school or local educational agency in which the re-*

1     *recipient is employed, as defined by the partnership ac-*  
2     *ording to the recipient's expertise, including serving*  
3     *as a mentor or master teacher, developing curricula,*  
4     *and assisting in the development and implementation*  
5     *of professional development activities.”;*

6             *(8) in subsection (f) (as redesignated by para-*  
7     *graph (6))—*

8                     *(A) by striking paragraph (1) and inserting*  
9     *the following:*

10                    *“(1) accepting—*

11                    *“(A) the terms of the scholarship pursuant*  
12                    *to subsection (c), the stipend pursuant to sub-*  
13                    *section (d), or the fellowship pursuant to sub-*  
14                    *section (e); and*

15                    *“(B) the terms regarding the failure to com-*  
16                    *plete a service obligation required for the scholar-*  
17                    *ship, stipend, or fellowship pursuant to sub-*  
18                    *section (h);”;* and

19                    *(B) in paragraph (3)—*

20                    *(i) by striking “scholarship” and in-*  
21                    *serting “scholarship, stipend, or fellowship”;*  
22                    *and*

23                    *(ii) by striking “subsection (g)” and*  
24                    *inserting “subsection (h)”;*

1           (9) in subsection (g)(1) (as redesignated by para-  
2 graph (6))—

3           (A) by striking “(or consortium thereof)”  
4 and inserting “, consortium, or partnership”;  
5 and

6           (B) by striking “scholarship and stipend”  
7 and inserting “scholarship, stipend, and fellow-  
8 ship”;

9           (10) in subsection (h) (as redesignated by para-  
10 graph (6))—

11           (A) in paragraph (1)—

12           (i) in the matter preceding subpara-  
13 graph (A), by inserting “, stipend, or fel-  
14 lowship” after “scholarship”; and

15           (ii) in subparagraph (C), by striking  
16 “baccalaureate degree”; and

17           (B) by striking paragraph (2) and inserting  
18 the following:

19           “(2) *REPAYMENT FOR FAILURE TO COMPLETE*  
20 *SERVICE.*—

21           “(A) *LESS THAN 1 YEAR OF SERVICE.*—If a  
22 circumstance described in paragraph (1) occurs  
23 before the completion of 1 year of a service obli-  
24 gation under this section, the sum of the total  
25 amount of awards received by the individual

1        *under this section shall be treated as a loan pay-*  
2        *able to the Federal Government, consistent with*  
3        *the provisions of part B or D of title IV of the*  
4        *Higher Education Act of 1965, and shall be sub-*  
5        *ject to repayment in accordance with terms and*  
6        *conditions specified by the Secretary of Edu-*  
7        *cation in regulations promulgated to carry out*  
8        *this paragraph.*

9                *“(B) 1 YEAR OR MORE OF SERVICE.—If a*  
10        *circumstance described in subparagraph (D) or*  
11        *(E) of paragraph (1) occurs after the completion*  
12        *of 1 year of a service obligation under this sec-*  
13        *tion, an amount equal to  $\frac{1}{2}$  of the sum of the*  
14        *total amount of awards received by the indi-*  
15        *vidual under this section shall be treated as a*  
16        *loan payable to the Federal Government, con-*  
17        *sistent with the provisions of part B or D of title*  
18        *IV of the Higher Education Act of 1965, and*  
19        *shall be subject to repayment in accordance with*  
20        *terms and conditions specified by the Secretary*  
21        *of Education in regulations promulgated to*  
22        *carry out this paragraph.”;*

23                *(11) in subsection (i) (as redesignated by para-*  
24        *graph (6))—*

1           (A) by striking “or consortia” and inserting  
2           “, consortia, or partnerships”;

3           (B) by striking “scholarship recipients and  
4           stipend recipients” and inserting “scholarship,  
5           stipend, and fellowship recipients”; and

6           (C) by striking “subsection (e)” and insert-  
7           ing “subsection (f)”;

8           (12) by inserting after subsection (i) (as redesign-  
9           nated by paragraph (6)) the following:

10          “(j) *SCIENCE AND MATHEMATICS SCHOLARSHIP GIFT*  
11 *FUND.—In accordance with section 11(f) of the National*  
12 *Science Foundation Act of 1950, the Director is authorized*  
13 *to accept donations from the private sector to supplement,*  
14 *but not supplant, scholarships, stipends, internships, or fel-*  
15 *lowships associated with the programs under this section.*

16          “(k) *ASSESSMENT OF TEACHER RETENTION.—Not*  
17 *later than 4 years after the date of enactment of the Amer-*  
18 *ica COMPETES Act, the Director shall transmit to Con-*  
19 *gress a report on the effectiveness of the program carried*  
20 *out under this section regarding the retention of partici-*  
21 *pants in the teaching profession beyond the service obliga-*  
22 *tion required under this section.”;*

23          (13) in subsection (l) (as redesignated by para-  
24          graph (6))—

1           (A) by redesignating paragraphs (1), (2),  
2           (3), (4), and (5) as paragraphs (2), (5), (7), (9),  
3           and (10), respectively;

4           (B) by inserting before paragraph (2) (as  
5           redesignated by subparagraph (A)) the following:

6           “(1) the term ‘advanced content knowledge’  
7           means demonstrated mathematics or science content  
8           knowledge as measured by a rigorous, valid assess-  
9           ment tool that has been approved by the Director;”;

10          (C) by inserting after paragraph (2) (as re-  
11          designated by subparagraph (A)) the following:

12          “(3) the term ‘fellowship’ means an award under  
13          subsection (e);

14          “(4) the term ‘high-need local educational agen-  
15          cy’ means a local educational agency or educational  
16          service agency (as defined in section 9101 of the Ele-  
17          mentary and Secondary Education Act of 1965)—

18                 “(A)(i) that serves not less than 10,000 chil-  
19                 dren from low-income families;

20                 “(ii) for which not less than 20 percent of  
21                 the children served by the agency are children  
22                 from low-income families; or

23                 “(iii) with a total of less than 600 students  
24                 in average daily attendance at the schools that  
25                 are served by the agency, and all of whose schools

1           *are designated with a school locale code of 6, 7,*  
2           *or 8, as determined by the Secretary of Edu-*  
3           *cation; and*

4           *“(B)(i) for which there is a higher percent-*  
5           *age of teachers providing instruction in aca-*  
6           *demically subject areas or grade levels for which the*  
7           *teachers are not highly qualified; or*

8           *“(ii) for which there is a high teacher turn-*  
9           *over rate or a high percentage of teachers with*  
10          *emergency, provisional, or temporary certifi-*  
11          *cation or licensure;”;*

12          *(D) in paragraph (5) (as redesignated by*  
13          *subparagraph (A)), by inserting “engineering,”*  
14          *after “mathematics, science,”;*

15          *(E) by inserting after paragraph (5) (as re-*  
16          *designated by subparagraph (A)) the following:*

17          *“(6) the term ‘mathematics and science teaching’*  
18          *means mathematics, science, engineering, or tech-*  
19          *nology teaching at the elementary or secondary school*  
20          *level;”;*

21          *(F) in paragraph (7) (as redesignated by*  
22          *subparagraph (A)) by inserting “or had a ca-*  
23          *reer” after “is working”; and*

24          *(G) by inserting after paragraph (7) (as re-*  
25          *designated by subparagraph (A)) the following:*

1           “(8) the term ‘partnership’ means a partnership  
2 that shall include—

3           “(A) an institution of higher education or a  
4 consortium of such institutions;

5           “(B) a department within an institution of  
6 higher education participating in the partner-  
7 ship that provides an advanced program of  
8 study in mathematics and science;

9           “(C)(i) a school or department within an  
10 institution of higher education participating in  
11 the partnership that provides a master teacher’s  
12 preparation program; or

13           “(ii) a 2-year institution of higher edu-  
14 cation that has a teacher preparation offering or  
15 a dual enrollment program with an institution  
16 of higher education participating in the partner-  
17 ship;

18           “(D) not less than 1 high-need local edu-  
19 cational agency and a public school or a consor-  
20 tium of public schools served by the agency; and

21           “(E) 1 or more nonprofit organizations that  
22 have the capacity to provide expertise or support  
23 to meet the purposes of this section;”;

24           (14) by adding at the end the following:

25           “(m) AUTHORIZATION OF APPROPRIATIONS.—

1           “(1) *IN GENERAL.*—*Within the amounts author-*  
2           *ized to be appropriated by section 4001 of the Amer-*  
3           *ica COMPETES Act and except as provided in para-*  
4           *graph (2), there are authorized to be appropriated to*  
5           *the Director for the Robert Noyce Teacher Program*  
6           *under this section—*

7                   “(A) *\$117,000,000 for fiscal year 2008, of*  
8                   *which at least \$18,000,000 shall be used for ca-*  
9                   *capacity building activities described in clauses*  
10                  *(ii) and (iii) of subsection (a)(3)(A), clauses (ii)*  
11                  *and (iii) of subsection (a)(3)(B), and clauses (ii)*  
12                  *and (iii) of subsection (a)(3)(C);*

13                  “(B) *\$130,000,000 for fiscal year 2009, of*  
14                  *which at least \$21,000,000 shall be used for such*  
15                  *capacity building activities;*

16                  “(C) *\$148,000,000 for fiscal year 2010, of*  
17                  *which at least \$24,000,000 shall be used for such*  
18                  *capacity building activities; and*

19                  “(D) *\$200,000,000 for fiscal year 2011, of*  
20                  *which at least \$27,000,000 shall be used for such*  
21                  *capacity building activities.*

22           “(2) *EXCEPTION.*—*For any fiscal year for which*  
23           *the funding allocated for activities under this section*  
24           *is less than \$105,000,000, the amount of funding*  
25           *available for capacity building activities described in*

1     *subparagraphs (A) through (D) of paragraph (1)*  
 2     *shall not exceed 15 percent of the allocated funds.”.*

3     **(b) CONFORMING AMENDMENTS.—**

4             **(1) SECTION 4.—***Section 4 of the National*  
 5     *Science Foundation Authorization Act of 2002 (42*  
 6     *U.S.C. 1862n note) is amended in the matter pre-*  
 7     *ceding paragraph (1) by striking “In this Act:” and*  
 8     *inserting “Except as otherwise provided, in this Act:”.*

9             **(2) SECTION 8.—***Section 8(6) of the National*  
 10     *Science Foundation Authorization Act of 2002 (Pub-*  
 11     *lic Law 107–368) is amended—*

12                 **(A)** *in the paragraph heading, by striking*  
 13             *“SCHOLARSHIP” and inserting “TEACHER”; and*

14                 **(B)** *by striking “Scholarship” and inserting*  
 15             *“Teacher”.*

16     **SEC. 4013. SENSE OF THE SENATE REGARDING THE MATHE-**  
 17             **MATICS AND SCIENCE PARTNERSHIP PRO-**  
 18             **GRAMS OF THE DEPARTMENT OF EDUCATION**  
 19             **AND THE NATIONAL SCIENCE FOUNDATION.**

20     *It is the sense of the Senate that—*

21             **(1)** *although the mathematics and science edu-*  
 22     *cation partnership program at the National Science*  
 23     *Foundation and the mathematics and science part-*  
 24     *nership program at the Department of Education*

1 *practically share the same name, the 2 programs are*  
2 *intended to be complementary, not duplicative;*

3 *(2) the National Science Foundation partnership*  
4 *programs are innovative, model reform initiatives*  
5 *that move promising ideas in education from research*  
6 *into practice to improve teacher quality, develop chal-*  
7 *lenging curricula, and increase student achievement*  
8 *in mathematics and science, and Congress intends*  
9 *that the National Science Foundation peer-reviewed*  
10 *partnership programs found to be effective should be*  
11 *put into wider practice by dissemination through the*  
12 *Department of Education partnership programs; and*

13 *(3) the Director of the National Science Founda-*  
14 *tion and the Secretary of Education should have on-*  
15 *going collaboration to ensure that the 2 components*  
16 *of this priority effort for mathematics and science*  
17 *education continue to work in concert for the benefit*  
18 *of States and local practitioners nationwide.*

19 **SEC. 4014. NATIONAL SCIENCE FOUNDATION TEACHER IN-**  
20 **STITUTES FOR THE 21ST CENTURY.**

21 *(a) AUTHORIZATION OF APPROPRIATIONS.—Within*  
22 *the amounts authorized to be appropriated by section 4001,*  
23 *there are authorized to be appropriated to carry out the*  
24 *teacher institutes for the 21st century under paragraphs (3)*  
25 *and (7) of section 9(a) of the National Science Foundation*

1 *Authorization Act of 2002 (as amended by subsection (b))*

2 *(42 U.S.C. 1862n(a))—*

3 *(1) \$84,000,000 for fiscal year 2008;*

4 *(2) \$94,000,000 for fiscal year 2009;*

5 *(3) \$106,000,000 for fiscal year 2010; and*

6 *(4) \$140,000,000 for fiscal year 2011.*

7 *(b) TEACHER INSTITUTES FOR THE 21ST CENTURY.—*

8 *Section 9(a) of the National Science Foundation Authoriza-*  
9 *tion Act of 2002 (42 U.S.C. 1862n(a)) is amended—*

10 *(1) in paragraph (3)(B), by striking “summer*  
11 *or” and inserting “teacher institutes for the 21st cen-*  
12 *tury, as described in paragraph (7),”;*

13 *(2) by redesignating paragraph (7) as para-*  
14 *graph (8); and*

15 *(3) by inserting after paragraph (6) the fol-*  
16 *lowing:*

17 *“(7) TEACHER INSTITUTES FOR THE 21ST CEN-*  
18 *TURY.—*

19 *“(A) IN GENERAL.—Teacher institutes for*  
20 *the 21st century carried out in accordance with*  
21 *paragraph (3)(B) shall—*

22 *“(i) be carried out in conjunction with*  
23 *a school served by the local educational*  
24 *agency in the partnership;*

1           “(ii) be science, technology, engineer-  
2           ing, and mathematics focused institutes that  
3           provide professional development to elemen-  
4           tary school and secondary school teachers;

5           “(iii) serve teachers who are considered  
6           highly qualified (as defined in section 9101  
7           of the *Elementary and Secondary Edu-*  
8           *cation Act of 1965*), teach high-need sub-  
9           jects, and teach in high-need schools (as de-  
10          scribed in section 1114(a)(1) of the *Elemen-*  
11          *tary and Secondary Education Act of*  
12          1965);

13          “(iv) focus on the theme and structure  
14          developed by the Director under subpara-  
15          graph (C);

16          “(v) be content-based and build on  
17          school year curricula that are experiment-  
18          oriented, content-based, and grounded in  
19          current research;

20          “(vi) ensure that the pedagogy compo-  
21          nent is designed around specific strategies  
22          that are relevant to teaching the subject and  
23          content on which teachers are being trained,  
24          which may include training teachers in the  
25          essential components of reading instruction

1           *for adolescents in order to improve student*  
2           *reading skills within the subject areas of*  
3           *science, technology, engineering, and mathe-*  
4           *matics;*

5           “(vii) *be a multiyear program that is*  
6           *conducted for a period of not less than 2*  
7           *weeks per year;*

8           “(viii) *provide for direct interaction*  
9           *between participants in and faculty of the*  
10          *teacher institute;*

11          “(ix) *have a component that includes*  
12          *the use of the Internet;*

13          “(x) *provide for followup training in*  
14          *the classroom during the academic year for*  
15          *a period of not less than 3 days, which may*  
16          *or may not be consecutive, for participants*  
17          *in the teacher institute, except that for*  
18          *teachers in rural local educational agencies,*  
19          *the followup training may be provided*  
20          *through the Internet;*

21          “(xi) *provide teachers participating in*  
22          *the teacher institute with travel expense re-*  
23          *imbursement and classroom materials re-*  
24          *lated to the teacher institute, and may in-*  
25          *clude providing stipends as necessary; and*

1           “(xii) establish a mechanism to pro-  
2           vide supplemental support during the aca-  
3           demic year for teacher institute partici-  
4           pants to apply the knowledge and skills  
5           gained at the teacher institute.

6           “(B) *OPTIONAL MEMBERS OF THE PART-*  
7           *NERSHIP.*—In addition to the partnership re-  
8           quirement under paragraph (2), an institution  
9           of higher education or eligible nonprofit organi-  
10          zation (or consortium) desiring a grant for a  
11          teacher institute for the 21st century may also  
12          partner with a teacher organization, museum, or  
13          educational partnership organization.

14          “(C) *THEME AND STRUCTURE.*—Each year,  
15          not later than 180 days before the application  
16          deadline for a grant under this section, the Di-  
17          rector shall, in consultation with a broad group  
18          of relevant education organizations, develop a  
19          theme and structure for the teacher institutes of  
20          the 21st century supported under paragraph  
21          (3)(B).”.

1 **SEC. 4015. PARTNERSHIPS FOR ACCESS TO LABORATORY**  
2 **SCIENCE.**

3 (a) *GRANT PROGRAM.*—Section 8(8) of the National  
4 *Science Foundation Authorization Act of 2002 (Public Law*  
5 *107–368) is amended—*

6 (1) *by redesignating subparagraphs (A) through*  
7 *(F) as clauses (i) through (vi), respectively, and in-*  
8 *denting appropriately;*

9 (2) *by moving the flush language at the end 2*  
10 *ems to the right;*

11 (3) *in the flush language at the end, by striking*  
12 *“paragraph” and inserting “subparagraph”;*

13 (4) *by striking “INITIATIVE.—A program of”*  
14 *and inserting “INITIATIVE.—*

15 *“(A) IN GENERAL.—A program of”;* and

16 (5) *by inserting at the end the following:*

17 *“(B) PILOT PROGRAM.—*

18 *“(i) IN GENERAL.—In accordance with*  
19 *subparagraph (A)(v), the Director shall es-*  
20 *tablish a pilot program designated as ‘Part-*  
21 *nerships for Access to Laboratory Science’*  
22 *to award grants to partnerships to pay the*  
23 *Federal share of the costs of improving lab-*  
24 *oratories and providing instrumentation as*  
25 *part of a comprehensive program to enhance*  
26 *the quality of mathematics, science, engi-*

1            *neering, and technology instruction at the*  
2            *secondary school level. Grants under this*  
3            *subparagraph may be used for—*

4                    *“(I) purchase, rental, or leasing of*  
5                    *equipment, instrumentation, and other*  
6                    *scientific educational materials;*

7                    *“(II) acquire appropriate*  
8                    *nanotechnology equipment and soft-*  
9                    *ware designed for teaching students*  
10                   *about nanotechnology in the classroom;*

11                   *“(III) professional development*  
12                   *and training for teachers aligned with*  
13                   *activities supported under section 2123*  
14                   *of the ESEA of 1965;*

15                   *“(IV) development of instructional*  
16                   *programs designed to integrate the lab-*  
17                   *oratory experience with classroom in-*  
18                   *struction and to be consistent with*  
19                   *State mathematics and science, and to*  
20                   *the extent applicable, technology and*  
21                   *engineering, academic achievement*  
22                   *standards;*

23                   *“(V) training in laboratory safety*  
24                   *for relevant school personnel;*

1           “(VI) design and implementation  
2           of hands-on laboratory experiences to  
3           encourage the interest of individuals  
4           identified in section 33 or 34 of the  
5           Science and Engineering Equal Op-  
6           portunities Act (42 U.S.C. 1885a or  
7           1885b) in mathematics, science, engi-  
8           neering, and technology and help pre-  
9           pare such individuals to pursue post-  
10          secondary studies in these fields; and

11           “(VII) assessment of the activities  
12          funded under this subparagraph.

13           “(i) PARTNERSHIP.—Grants awarded  
14          under clause (i) shall be to a partnership  
15          that—

16           “(I) includes an institution of  
17          higher education or a community col-  
18          lege;

19           “(II) includes a high-need local  
20          educational agency;

21           “(III) includes a business or eligi-  
22          ble nonprofit organization; and

23           “(IV) may include a State edu-  
24          cational agency, other public agency,

1                    *National Laboratory, or community-*  
2                    *based organization.*

3                    “(iii) *FEDERAL SHARE.—The Federal*  
4                    *share of the cost of activities carried out*  
5                    *using amounts from a grant under clause*  
6                    *(i) shall not exceed 30 percent.”.*

7                    (b) *REPORT.—The Director of the National Science*  
8                    *Foundation shall evaluate the effectiveness of activities car-*  
9                    *ried out under the pilot projects funded by the grant pro-*  
10                    *gram established pursuant to the amendment made by sub-*  
11                    *section (b) in improving student performance in mathe-*  
12                    *matics, science, engineering, and technology and rec-*  
13                    *ommend whether such activities should continue. A report*  
14                    *documenting the results of that evaluation shall be sub-*  
15                    *mitted to the Committee on Commerce, Science, and Trans-*  
16                    *portation and the Committee on Health, Education, Labor,*  
17                    *and Pensions of the Senate and the Committee on Science*  
18                    *and Technology of the House of Representatives not later*  
19                    *than 3 years after the date of enactment of this Act. The*  
20                    *report shall identify best practices and materials for the*  
21                    *classroom developed and demonstrated by grant awardees.*

22                    (c) *SUNSET.—The provisions of this section shall cease*  
23                    *to have force or effect at the beginning of fiscal year 2012.*

24                    (d) *AUTHORIZATION OF APPROPRIATIONS.—There are*  
25                    *authorized to be appropriated to the National Science*

1 *Foundation to carry out this section and the amendments*  
2 *made by this section such sums for fiscal year 2008 and*  
3 *each of the 3 succeeding fiscal years.*

4 ***DIVISION E—GENERAL***  
5 ***PROVISIONS***

6 ***SEC. 5001. COLLECTION OF DATA RELATING TO TRADE IN***  
7 ***SERVICES.***

8 *(a) IN GENERAL.—Not later than 90 days after the*  
9 *date of the enactment of this Act, the Secretary of Commerce*  
10 *shall establish a program within the Bureau of Economic*  
11 *Analysis to collect and study data relating to export and*  
12 *import of services. As part of the program, the Secretary*  
13 *shall annually—*

14 *(1) provide data collection and analysis relating*  
15 *to export and import of services;*

16 *(2) collect and analyze data for service imports*  
17 *and exports in not less than 40 service industry cat-*  
18 *egories, on a state-by-state basis;*

19 *(3) include data collection and analysis of the*  
20 *employment effects of exports and imports on the serv-*  
21 *ice industry; and*

22 *(4) integrate ongoing and planned data collec-*  
23 *tion and analysis initiatives in research and develop-*  
24 *ment and innovation.*

1       **(b) AUTHORIZATION OF APPROPRIATIONS.**—*There are*  
2 *authorized to be appropriated to the Department of Com-*  
3 *merce such sums for each of the fiscal years 2008, 2009,*  
4 *2010, 2011, 2012, to carry out the provisions of this section.*

5 **SEC. 5002. SENSE OF THE SENATE REGARDING SMALL BUSI-**  
6 **NESS GROWTH AND CAPITAL MARKETS.**

7       **(a) FINDINGS.**—*The Congress finds that—*

8               (1) *the United States has the most fair, most*  
9 *transparent, and most efficient capital markets in the*  
10 *world, in part due to its strong securities statutory*  
11 *and regulatory scheme;*

12               (2) *it is of paramount importance for the contin-*  
13 *ued growth of our Nation’s economy, that our capital*  
14 *markets retain their leading position in the world;*

15               (3) *small businesses are vital participants in*  
16 *United States capital markets, and play a critical*  
17 *role in future economic growth and high-wage job cre-*  
18 *ation;*

19               (4) *section 404 of the Sarbanes-Oxley Act of*  
20 *2002, has greatly enhanced the quality of corporate*  
21 *governance and financial reporting for public compa-*  
22 *nies and increased investor confidence;*

23               (5) *the Securities and Exchange Commission (in*  
24 *this section referred to as the “Commission”) and the*  
25 *Public Company Accounting Oversight Board (in this*

1     *section referred to as the “PCAOB”)* have both deter-  
2     *mined that the current auditing standard imple-*  
3     *menting section 404 of the Sarbanes-Oxley Act of*  
4     *2002 has imposed unnecessary and unintended cost*  
5     *burdens on small and mid-sized public companies;*

6             *(6) the Commission and PCAOB are now near*  
7     *completion of a 2-year process intended to revise the*  
8     *standard in order to provide more efficient and effec-*  
9     *tive regulation; and*

10            *(7) the chairman of the Commission recently has*  
11     *said, with respect to section 404 of the Sarbanes-*  
12     *Oxley Act of 2002, that, “We don’t need to change the*  
13     *law, we need to change the way the law is imple-*  
14     *mented. It is the implementation of the law that has*  
15     *caused the excessive burden, not the law itself. That’s*  
16     *an important distinction. I don’t believe these impor-*  
17     *tant investor protections, which are even now only a*  
18     *few years old, should be opened up for amendment, or*  
19     *that they need to be.”.*

20            *(b) SENSE OF THE SENATE.—It is the sense of the Sen-*  
21     *ate that the Commission and the PCAOB should complete*  
22     *promulgation of the final rules implementing section 404*  
23     *of the Sarbanes-Oxley Act of 2002 (15 U.S.C. 7262).*

1 **SEC. 5003. GOVERNMENT ACCOUNTABILITY OFFICE REVIEW**  
2 **OF ACTIVITIES, GRANTS, AND PROGRAMS.**

3 *Not later than 3 years after the date of enactment of*  
4 *this Act, the Comptroller General of the United States shall*  
5 *submit a report to Congress that—*

6 *(1) examines each annual and interim report re-*  
7 *quired to be submitted to Congress under this Act (in-*  
8 *cluding any amendment made by this Act);*

9 *(2) assesses or evaluates assessments of the effec-*  
10 *tiveness of the new or expended activities, grants, and*  
11 *programs carried out under this Act (including any*  
12 *amendment made by this Act); and*

13 *(3) includes any recommendations as the Comp-*  
14 *troller General determines are appropriate to improve*  
15 *the effectiveness of such activities, grants, and pro-*  
16 *grams.*

17 **SEC. 5004. PROHIBITION AGAINST FUNDING ANTI-COMPETI-**  
18 **TIVENESS.**

19 *Notwithstanding any other provision of the Law; no*  
20 *federal funds shall be provided to any organization or enti-*  
21 *ty that advocates against tax competition or United States*  
22 *tax competitiveness.*

23 *Provided, however, that advocating for effective tax in-*  
24 *formation exchange, advocating for effective transfer pric-*  
25 *ing, and advocating for income tax treaties is not consid-*

1 *ered to be advocating against tax competition of United*  
2 *States tax competitiveness.*

3 **SEC. 5005. FEASIBILITY STUDY ON FREE ONLINE COLLEGE**  
4 **DEGREE PROGRAM.**

5 (a) *IN GENERAL.*—Not later than 90 days after the  
6 date of enactment of this Act, the Secretary of Commerce  
7 shall enter into a contract with the National Academy of  
8 Sciences to conduct and complete a feasibility study on cre-  
9 ating a national, free online college degree program that  
10 would be available to all individuals described under section  
11 484(a)(5) of the Higher Education Act of 1965 (20 U.S.C.  
12 1091(a)(5)) who wish to pursue a degree in a field of stra-  
13 tegic importance to the United States and where expertise  
14 is in demand, such as mathematics, sciences, and foreign  
15 languages. The study shall look at the need for a free college  
16 degree program as well as the feasibility of—

- 17 (1) *developing online course content;*  
18 (2) *developing sufficiently rigorous tests to deter-*  
19 *mine mastery of a field of study; and*  
20 (3) *sustaining the program through private*  
21 *funding.*

22 (b) *STUDY.*—The study described in subsection (a)  
23 shall also include a review of existing online education pro-  
24 grams to determine the extent to which these programs offer  
25 a rigorous curriculum in areas like mathematics and

1 *science and the National Academy of Sciences shall make*  
2 *recommendations for how online degree programs can be as-*  
3 *essed and accredited.*

4 (c) *AUTHORIZATION OF APPROPRIATIONS.—There are*  
5 *authorized to be appropriated to carry out this section*  
6 *\$500,000 for fiscal year 2008.*

7 **SEC. 5006. SENSE OF THE SENATE REGARDING DEEMED EX-**  
8 **PORTS.**

9 *It is the sense of Senate that—*

10 (1) *United States government policies related to*  
11 *deemed exports should safeguard United States na-*  
12 *tional security and protect fundamental research.*

13 (2) *The Department of Commerce has established*  
14 *the Deemed Export Advisory Committee to develop*  
15 *recommendations for improving current controls on*  
16 *deemed exports.*

17 (3) *The Administration and Congress should*  
18 *consider the recommendations of the Deemed Export*  
19 *Advisory Committee in its development and imple-*  
20 *mentation of export control policies.*

21 **SEC. 5007. SENSE OF THE SENATE REGARDING CAPITAL**  
22 **MARKETS.**

23 (a) *FINDINGS.—The Senate finds that—*

24 (1) *United States capital markets are losing*  
25 *their competitive edge in the face of intensifying glob-*

1 *al competition, posing a risk to economic growth, a*  
2 *problem that is well-documented in initial public of-*  
3 *ferings (IPO), over-the-counter (OTC) derivatives,*  
4 *securitization, and traditional lending;*

5 (2) *according to the Senator Charles E. Schumer*  
6 *and Mayor Michael R. Bloomberg report, entitled*  
7 *“Sustaining New York’s and the US’s Global Finan-*  
8 *cial Services Leadership”, “In looking at several of*  
9 *the critical contested investment banking and sales*  
10 *and trading markets—initial public offerings (IPOs),*  
11 *over-the-counter (OTC) derivatives, and debt—it is*  
12 *clear that the declining position of the US goes be-*  
13 *yond this natural market evolution to more control-*  
14 *lable, intrinsic issues of US competitiveness. As mar-*  
15 *ket effectiveness, liquidity and safety become more*  
16 *prevalent in the world’s financial markets, the com-*  
17 *petitive arena for financial services is shifting toward*  
18 *a new set of factors—like availability of skilled people*  
19 *and a balanced and effective legal and regulatory en-*  
20 *vironment—where the US is moving in the wrong di-*  
21 *rection.”;*

22 (3) *further, the report referred to in paragraph*  
23 *(2) stated that—*

24 (A) *“The IPO market also offers the most*  
25 *dramatic illustration of the change in capital-*

1        *raising needs around the world, and US ex-*  
2        *changes are rapidly losing ground to foreign ri-*  
3        *vals. When looking at all IPOs that took place*  
4        *globally in 2006, the share of IPO volume at-*  
5        *tracted by US exchanges is barely one-third of*  
6        *that captured in 2001. By contrast, the global*  
7        *share of IPO volume captured by European ex-*  
8        *changes has expanded by more than 30 percent*  
9        *over the same period, while non-Japan Asian*  
10       *markets have doubled their equivalent market*  
11       *share since 2001. When one considers mega-IPOs*  
12       *– those over \$1 billion – US exchanges attracted*  
13       *57 percent of such transactions in 2001, com-*  
14       *pared with just 16 percent during the first ten*  
15       *months of 2006.”; and*

16            (B) *“London already enjoys clear leadership*  
17        *in the fast-growing and innovative over-the-*  
18        *counter (OTC) derivatives market. This is sig-*  
19        *nificant because of the trading flow that sur-*  
20        *rounds derivatives markets and because of the in-*  
21        *novation these markets drive, both of which are*  
22        *key competitive factors for financial centers.*  
23        *Dealers and investors increasingly see derivatives*  
24        *and cash markets as interchangeable and are*  
25        *therefore combining trading operations for both*

1           *products. Indeed, the derivatives markets can be*  
2           *more liquid than the underlying cash markets.*  
3           *Therefore, as London takes the global lead in de-*  
4           *derivatives, America’s competitiveness in both cash*  
5           *and derivatives flow trading is at risk, as is its*  
6           *position as a center for financial innovation.”;*

7           (4) *on March 13, 2007, the Department of the*  
8           *Treasury convened a conference on United States cap-*  
9           *ital markets competitiveness, where—*

10           (A) *key policymakers, consumer advocates,*  
11           *members of the international community, busi-*  
12           *ness representatives, and academic experts, each*  
13           *with different perspectives, discussed ways to*  
14           *keep United States capital markets the strongest*  
15           *and most innovative in the world; and*

16           (B) *conference delegates examined the im-*  
17           *port of the United States regulatory structure*  
18           *and philosophy, the legal and corporate govern-*  
19           *ance environment, and the auditing profession*  
20           *and financial reporting on United States capital*  
21           *markets competitiveness;*

22           (5) *the foundation of any competitive capital*  
23           *market is investor confidence, and since 1930, the*  
24           *United States has required some of the most extensive*

1 *financial disclosures, supported by one of the most ro-*  
2 *bust enforcement regimes in the world;*

3 *(6) a balanced regulatory system is essential to*  
4 *protecting investors and the efficient functioning of*  
5 *capital markets; and*

6 *(7) too much regulation stifles entrepreneurship,*  
7 *competition, and innovation, and too little regulation*  
8 *creates excessive risk to industry, investors, and the*  
9 *overall system.*

10 *(b) SENSE OF THE SENATE.—It is the sense of the Sen-*  
11 *ate that—*

12 *(1) Congress, the President, regulators, industry*  
13 *leaders, and other stakeholders should take the nec-*  
14 *essary steps to reclaim the preeminent position of the*  
15 *United States in the global financial services market-*  
16 *place;*

17 *(2) the Federal and State financial regulatory*  
18 *agencies should, to the maximum extent possible, co-*  
19 *ordinate activities on significant policy matters, so as*  
20 *not to impose regulations that may have adverse un-*  
21 *intended consequences on innovativeness with respect*  
22 *to financial products, instruments, and services, or*  
23 *that impose regulatory costs that are disproportionate*  
24 *to their benefits, and, at the same time, ensure that*  
25 *the regulatory framework overseeing the United States*

1 *capital markets continues to promote and protect the*  
2 *interests of investors in those markets; and*

3 *(3) given the complexity of the financial services*  
4 *marketplace today, Congress should exercise vigorous*  
5 *oversight over Federal regulatory and statutory re-*  
6 *quirements affecting the financial services industry*  
7 *and consumers, with the goal of eliminating excessive*  
8 *regulation and problematic implementation of exist-*  
9 *ing laws and regulations, while ensuring that nec-*  
10 *essary investor protections are not compromised.*

Attest:

*Secretary.*

110<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

**H. R. 2272**

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**AMENDMENT**