

112TH CONGRESS
1ST SESSION

H. R. 2598

To establish a Science, Technology, Engineering, and Math (STEM) Master Teacher Corps program.

IN THE HOUSE OF REPRESENTATIVES

JULY 20, 2011

Mr. BISHOP of New York introduced the following bill; which was referred to the Committee on Education and the Workforce

A BILL

To establish a Science, Technology, Engineering, and Math (STEM) Master Teacher Corps program.

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

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “STEM Master Teacher
5 Corps Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

8 (1) Numerous recent reports by national advi-
9 sory groups, including the President’s Council of Ad-
10 visors on Science and Technology and National

1 Academies' committees, have highlighted the need to
2 raise student achievement in STEM fields to enable
3 the United States to maintain its competitive edge
4 in the global economy.

5 (2) Nearly all of the top 30 fastest growing oc-
6 cupations require science, technology, engineering, or
7 mathematics skills, according to the Bureau of
8 Labor Statistics.

9 (3) Recent standardized tests show United
10 States students' mathematics and science perform-
11 ance is only average or below average compared with
12 their international peers. American students placed
13 25th in mathematics and 17th in science out of 34
14 Organisation for Economic Co-operation and Devel-
15 opment countries in the 2009 Program for Inter-
16 national Student Assessment.

17 (4) Too few American students graduate from
18 high school with the interest and the preparation to
19 successfully pursue STEM degrees in college. Well
20 over half of college students in China and Japan
21 major in STEM fields, compared with only a third
22 of U.S. students.

23 (5) Several researchers, including at Stanford
24 University, have found that the effects of well-pre-
25 pared teachers on student achievement can be

1 stronger than the influences of student background
2 factors, such as poverty, language background, and
3 minority status.

4 (6) The Harvard Graduate School of Education
5 report “Who Stays in Teaching and Why” cites re-
6 search that shows more young people would consider
7 teaching if it offered more opportunities for advance-
8 ment, and that if schools fail to offer teachers these
9 opportunities throughout their teaching careers, they
10 may risk losing them permanently. It also reports
11 that well implemented mentoring and induction pro-
12 grams provide the support novices need to feel satis-
13 fied and remain in their schools.

14 (7) Researchers at the University of Pennsyl-
15 vania have found that STEM teachers migrate with-
16 in the teaching profession to better paying jobs at
17 better-funded schools, resulting in local imbalances
18 and leaving schools in high-poverty communities
19 struggling to find knowledgeable teachers.

20 (8) Individuals with strong STEM skills have
21 opportunities for more lucrative careers outside of
22 teaching. According to the Organisation for Eco-
23 nomic Co-operation and Development (OECD), the
24 United States ranks in the bottom third of OECD
25 countries in terms of teacher salary relative to per

1 capita GDP. Furthermore, data from the National
2 Association of Colleges and Employers show the me-
3 dian salary offered to recent college graduates in
4 certain STEM-related fields, including physics, com-
5 puter science, accounting, and engineering, is
6 \$24,000 higher than that offered to new secondary
7 school teachers and \$30,000 higher than that of-
8 fered to new elementary school teachers.

9 **SEC. 3. STEM MASTER TEACHER CORPS.**

10 Subpart 5 of part A of title II of the Elementary and
11 Secondary Education Act of 1965 (20 U.S.C. 6651 et
12 seq.) is amended—

13 (1) by inserting before section 2151 the fol-
14 lowing:

15 **“CHAPTER A—NATIONAL ACTIVITIES OF**
16 **DEMONSTRATED EFFECTIVENESS”;**

17 and

18 (2) by adding at the end the following:

19 **“CHAPTER B—STEM MASTER TEACHER**
20 **CORPS**

21 **“SEC. 2155. PURPOSE.**

22 “The purpose of this chapter is to establish a STEM
23 Master Teacher Corps program that—

24 “(1) elevates the status of the STEM teaching
25 profession by recognizing and rewarding outstanding

1 STEM teachers thereby making STEM teaching
2 more attractive;

3 “(2) attracts and retains effective STEM teach-
4 ers, particularly in high-need schools, by offering
5 them additional compensation, instructional re-
6 sources, and instructional leadership roles; and

7 “(3) creates a network of outstanding STEM
8 teacher-leaders who will—

9 “(A) share best practices and resources;

10 “(B) take on leadership responsibilities in
11 their schools, districts, States (if part of the
12 participating area), or consortia with the au-
13 thority to provide professional support to their
14 STEM colleagues not participating in the
15 STEM Master Teacher Corps;

16 “(C) aid in the development and retention
17 of beginning teachers by serving as their role
18 models and providing them with instructional
19 support; and

20 “(D) inform the development of STEM
21 education policy.

22 **“SEC. 2156. DEFINITIONS.**

23 “In this chapter:

24 “(1) ELIGIBLE ENTITY.—The term ‘eligible en-
25 tity’ means a consortium of local educational agen-

1 cies or 1 or more State educational agencies, acting
2 in partnership with 1 or more—

3 “(A) institutions of higher education; or

4 “(B) nonprofit organizations with a dem-
5 onstrated record of success in preparing or im-
6 proving the effectiveness of STEM teachers.

7 “(2) HIGH-NEED SCHOOL.—The term ‘high-
8 need school’ means a public school, which may be a
9 public charter school, that meets 1 or more of the
10 following criteria:

11 “(A) Not less than 40 percent of the stu-
12 dents enrolled at the school—

13 “(i) receive or are eligible to receive a
14 free or reduced price lunch under the Rich-
15 ard B. Russell National School Lunch Act
16 (42 U.S.C. 1751 et seq.); or

17 “(ii) are from low-income families, as
18 determined using 1 of the measures of pov-
19 erty specified under section 1113(a)(5).

20 “(B) The school is among the lowest per-
21 forming 10 percent of schools in the State in
22 which it is located.

23 “(C) In the case of a public high school,
24 the school has a graduation rate of 65 percent
25 or less.

1 “(D) In the case of a public school con-
2 taining middle grades, the school feeds into a
3 public high school that has a graduation rate of
4 65 percent or less.

5 “(3) PARTICIPATING AREA.—The term ‘partici-
6 pating area’ means—

7 “(A) in the case of an eligible entity that
8 includes a State educational agency or consor-
9 tium of State educational agencies, the State or
10 States; or

11 “(B) in the case of an eligible entity that
12 includes a consortium of local educational agen-
13 cies, the area served by such agencies.

14 “(4) STEM.—The term ‘STEM’ means science,
15 technology, engineering, and mathematics.

16 **“SEC. 2157. STEM MASTER TEACHER CORPS PROGRAM.**

17 “(a) IN GENERAL.—

18 “(1) GRANTS AUTHORIZED.—The Secretary, in
19 consultation with the Director of the National
20 Science Foundation and the heads of other appro-
21 priate Federal agencies, as determined by the Sec-
22 retary, shall establish a STEM Master Teacher
23 Corps program by awarding, on a competitive basis,
24 1 or more grants of not less than \$15,000,000 each
25 to eligible entities to enable the eligible entities to

1 establish the program, in accordance with section
2 2159.

3 “(2) PLANNING GRANTS.—The Secretary may
4 award planning grants to eligible entities to enable
5 the entities to make plans to establish the program,
6 in accordance with section 2159.

7 “(b) DURATION OF GRANT.—

8 “(1) IN GENERAL.—A grant awarded under
9 this chapter shall be for a period of 5 years.

10 “(2) REVIEW.—The Secretary shall review, 3
11 years after an eligible entity is awarded a grant
12 under this chapter, the performance of the entity
13 during the 3-year period to determine if the entity
14 is achieving satisfactory results and to make rec-
15 ommendations as to whether the program should be
16 continued after completion of the 5-year period of
17 the pilot project.

18 “(c) MATCHING REQUIREMENT.—

19 “(1) IN GENERAL.—Except as provided in para-
20 graph (2), an eligible entity that receives a grant
21 under this chapter shall provide, from non-Federal
22 sources, an amount equal to not less than 50 per-
23 cent of the amount of the grant, which may be pro-
24 vided in cash or in-kind, to carry out the activities
25 supported by the grant.

1 “(2) EXCEPTION.—

2 “(A) IN GENERAL.—The Secretary may
3 waive the 50-percent matching requirement
4 under paragraph (1) for an eligible entity that
5 the Secretary determines is unable to meet such
6 requirement. The Secretary shall set a match-
7 ing requirement for such eligible entities ac-
8 cording to the sliding scale described in sub-
9 paragraph (B).

10 “(B) SLIDING SCALE.—The amount of a
11 match under subparagraph (A) shall be estab-
12 lished based on a sliding fee scale that takes
13 into account—

14 “(i) the relative poverty of the popu-
15 lation to be targeted by the eligible entity;
16 and

17 “(ii) the ability of the eligible entity to
18 obtain such matching funds.

19 “(3) CONSIDERATION.—The Secretary shall not
20 consider an eligible entity’s ability to match funds
21 when determining which eligible entities will receive
22 grant awards under this chapter.

23 **“SEC. 2158. APPLICATION.**

24 “(a) IN GENERAL.—An eligible entity desiring a
25 grant under this chapter shall submit an application to

1 the Secretary at such time, in such manner, and con-
2 taining such information as the Secretary may require.

3 “(b) CONTENTS.—An application submitted under
4 this section shall include—

5 “(1) a description of the STEM Master Teach-
6 er Corps program that the eligible entity intends to
7 carry out, including the number of Corps members
8 the entity intends to select, the intended distribution
9 of subjects and grade levels taught, the geographic
10 and economic characteristics of the local educational
11 agencies that are part of the participating area, such
12 as the rural-urban continuum codes and proportion
13 of high-need schools served, and the type of activi-
14 ties proposed for recruitment of Corps members;

15 “(2) a description of the roles and responsibil-
16 ities that each participating local educational agency,
17 State, institution of higher education, or nonprofit
18 organization, as applicable, will have;

19 “(3) a demonstration that the entity has suffi-
20 cient capacity to carry out the activities described in
21 section 2159;

22 “(4) a description of the member selection proc-
23 ess and criteria that the applicant will use to select
24 members of the STEM Master Teacher Corps, in ac-
25 cordance with section 2159(b);

1 “(5) a description of how the eligible entity in-
2 tends to facilitate networking and sharing of best
3 practices and educational resources relating to
4 STEM education among Corps members, particu-
5 larly at rural schools, if applicable, and make a se-
6 lection of these best practices and resources more
7 widely available to other teachers and the STEM
8 educational community, including through electronic
9 means;

10 “(6) a demonstration that the entity has a clear
11 plan for—

12 “(A) offering research-based professional
13 development to Corps members, including train-
14 ing on instructional leadership, mentoring, en-
15 gaging and effectively teaching historically
16 underachieving or underrepresented groups in
17 STEM fields, such as girls, minorities, low-in-
18 come students, English language learners, and
19 students with disabilities, and effective STEM
20 teaching methods, such as incorporating hands-
21 on STEM projects into their lesson plans; and

22 “(B) tracking the effectiveness of such
23 professional development;

24 “(7) a demonstration that the entity has a clear
25 plan for evaluating the impact of the professional

1 support provided by STEM Master Teacher Corps
2 members to other teachers in their school, district,
3 State (if part of the participating area), or consor-
4 tium;

5 “(8) a description of how the local educational
6 agencies and schools served by the eligible entity in-
7 tend to align STEM Master Teacher Corps mem-
8 bers’ duties with school systems and activities al-
9 ready in place, if applicable, such as professional de-
10 velopment and mentoring;

11 “(9) an explanation of how STEM Master
12 Teacher Corps members will be afforded the time,
13 authority, and resources to fulfill requirements
14 under the program, and how other teachers will be
15 afforded the time to receive professional support
16 from Corps members;

17 “(10) a demonstration that the entity has a
18 clear plan for oversight to ensure that STEM Mas-
19 ter Teacher Corps members carry out the respon-
20 sibilities described in section 2159(c) to the fullest
21 extent practicable, and a description of the actions
22 to be taken if a member does not carry out such re-
23 sponsibilities; and

24 “(11) a description of how the grant funds will
25 be financially managed.

1 “(c) CRITERIA FOR AWARDING GRANTS.—

2 “(1) IN GENERAL.—The Secretary shall award
3 grants under this chapter on the basis of merit con-
4 sidering, at a minimum, the following:

5 “(A) The extent to which the local edu-
6 cational agencies that are part of the eligible
7 entity are committed to integrating the pro-
8 gram into existing school structures, policies,
9 operations, and budgets, such as by enabling
10 STEM Master Teacher Corps members to take
11 on leadership roles in their schools, districts,
12 States, if part of the participating area, or con-
13 sortia, in addition to their classroom duties, in-
14 cluding assisting in the development and imple-
15 mentation of professional development activities
16 and driving the instructional program of the
17 school.

18 “(B) The quality of the proposed profes-
19 sional development, teacher leadership and
20 mentorship activities, and networking opportu-
21 nities.

22 “(C) Demonstration that the local edu-
23 cational agencies and schools they serve have
24 removed barriers to full participation in the
25 program, including affording Corps members

1 and the teachers they mentor the time to par-
2 ticipate in activities required by the program.

3 “(D) The number and quality of the indi-
4 viduals that will be served by the program.

5 “(E) The capacity of the eligible entity to
6 effectively carry out the program.

7 “(2) PRIORITY.—In awarding grants under this
8 chapter, the Secretary shall give priority to—

9 “(A) eligible entities that intend to include
10 large numbers of teachers in the STEM Master
11 Teacher Corps; and

12 “(B) eligible entities that intend to include
13 rural schools, particularly high-need rural
14 schools, in the participating area to be served.

15 **“SEC. 2159. REQUIRED USE OF FUNDS.**

16 “(a) IN GENERAL.—An eligible entity receiving a
17 grant under this chapter shall use grant funds to—

18 “(1) administer the selection of teachers for
19 membership in the STEM Master Teacher Corps, in
20 accordance with the requirements of subsection (b);

21 “(2) provide compensation to each public school
22 teacher who is selected and serves as a member of
23 the STEM Master Teacher Corps, in recognition of
24 the teacher’s teaching accomplishments, leadership,
25 and increased responsibilities, which amount shall—

1 “(A) supplement, and not supplant, the
2 teacher’s base salary; and

3 “(B) be equal to \$15,000 per year for each
4 year the teacher serves as a member of the
5 Corps;

6 “(3) provide research-based professional devel-
7 opment activities for members of the STEM Master
8 Teacher Corps, as described in subsection
9 2158(b)(6), and track the effectiveness of such pro-
10 fessional development in order to determine whether
11 to alter professional development activities;

12 “(4) provide discretionary resources for STEM
13 Master Teacher Corps members at high-need public
14 schools to use in their classrooms and schools, in-
15 cluding for afterschool activities, to enrich STEM
16 education and to facilitate long-distance networking,
17 mentoring, and sharing of best practices, including
18 equipment and technology;

19 “(5) assist in coordinating instructional leader-
20 ship roles for STEM Master Teacher Corps mem-
21 bers and mentoring relationships between STEM
22 Master Teacher Corps members and other teachers
23 in the same school, school district, State, if part of
24 the participating area, or consortium in which the
25 Corps members serve as instructional leaders;

1 “(6) facilitate efforts by STEM Master Teacher
2 Corps members to inform STEM education policy at
3 the national, State, and local levels;

4 “(7) help defray costs associated with affording
5 STEM Master Teacher Corps members the time to
6 fulfill their duties as Corps members; and

7 “(8) support other activities that advance the
8 purpose of this chapter.

9 “(b) SELECTING MEMBERS OF THE STEM MASTER
10 TEACHER CORPS.—

11 “(1) SELECTION CRITERIA FOR CORPS MEM-
12 BERS.—The eligible entity shall select, as members
13 of the STEM Master Teacher Corps, exemplary
14 STEM teachers at the elementary school and sec-
15 ondary school levels who teach in the participating
16 area, which may also include special education
17 teachers and teachers of English language learners
18 who teach a STEM subject. In selecting the mem-
19 bers, the eligible entity shall—

20 “(A) make decisions based on multiple
21 measures, including the teacher’s—

22 “(i) ability to improve student aca-
23 demic achievement in the STEM fields, as
24 demonstrated by, if applicable, student
25 academic growth in such fields;

1 “(ii) ability to enhance student en-
2 gagement in such fields;

3 “(iii) record of leadership in the
4 teacher’s school and involvement in profes-
5 sional and outreach activities;

6 “(iv) record of teaching students not
7 on grade level or not on track to graduate
8 college and career ready; and

9 “(v) demonstrated ability to facilitate
10 student academic achievement growth with
11 the students described in clause (iv), where
12 such measures are available; and

13 “(B) evaluate the teacher’s ability and
14 record based on multiple measures, such as—

15 “(i) teacher evaluations of pedagogical
16 skills;

17 “(ii) an assessment of content knowl-
18 edge;

19 “(iii) the performance and improve-
20 ment of the teacher’s students on tests;

21 “(iv) demonstration of practical pro-
22 fessional experience in the teacher’s dis-
23 cipline, such as having worked in industry
24 or research;

1 “(v) involvement in STEM discipline
2 professional societies;

3 “(vi) STEM outreach and community
4 involvement; and

5 “(vii) certification by the National
6 Board for Professional Teaching Stand-
7 ards, or other similar certification, as a
8 high-performing teacher.

9 “(2) OVERALL CORPS MEMBERSHIP REQUIRE-
10 MENTS.—An eligible entity receiving a grant under
11 this chapter shall ensure that—

12 “(A) not more than 5 percent of the
13 STEM teachers who teach in the participating
14 area are members of the Corps;

15 “(B) not less than 75 percent of the
16 STEM Master Teacher Corps members are
17 teachers at high-need schools;

18 “(C) there are multiple cohorts of STEM
19 Master Teacher Corps members; and

20 “(D) the STEM Master Teacher Corps in-
21 cludes teachers from each of science, tech-
22 nology, engineering, and mathematics, if teach-
23 ers from each of these disciplines meeting the
24 standards of Corps membership are available in
25 the participating area.

1 “(3) PARTICIPATION OF PRIVATE SCHOOL
2 TEACHERS.—An eligible entity may select STEM
3 teachers who teach at private schools in the partici-
4 pating area to be members of the STEM Master
5 Teacher Corps, except that—

6 “(A) not more than 5 percent of teachers
7 selected as STEM Master Teacher Corps mem-
8 bers shall be teachers at private schools; and

9 “(B) private school teachers shall not be
10 eligible for compensation described in sub-
11 section (a)(2), discretionary resource funds de-
12 scribed in subsection (a)(4), or for defrayment
13 funds described in subsection (a)(7).

14 “(c) CORPS MEMBER REQUIREMENTS.—Each teach-
15 er selected to be a member of the STEM Master Teacher
16 Corps who wishes to join the Corps shall enter into an
17 agreement with the eligible entity, under which the teacher
18 shall, as a condition of receiving the compensation de-
19 scribed in subsection (a)(2) and the discretionary re-
20 sources described in subsection (a)(4), agree to carry out
21 the responsibilities of a mentor teacher as required by the
22 eligible entity, including—

23 “(1) participating in professional development
24 activities offered by the program;

1 “(2) networking and sharing best practices and
2 educational resources with other members of the
3 STEM Master Teacher Corps; and

4 “(3) contributing to the professional develop-
5 ment of the teacher’s colleagues, which may include
6 providing school-based professional support to other
7 STEM teachers through regular weekly professional
8 development sessions and individual coaching, where
9 possible, leading professional learning communities,
10 and taking on other instructional leadership roles in
11 the teacher’s school, district, State, if part of the
12 participating area, or consortium.

13 “(d) COLLECTION FOR NONCOMPLIANCE.—

14 “(1) MONITORING COMPLIANCE.—Each eligible
15 entity that receives a grant under this chapter shall
16 monitor whether each teacher the entity selects to be
17 a member of the STEM Master Teacher Corps is in
18 compliance with the Corps member requirements de-
19 scribed in subsection (c).

20 “(2) COLLECTION OF REPAYMENT.—

21 “(A) IN GENERAL.—A teacher selected to
22 be a member of the STEM Master Teacher
23 Corps shall repay the additional compensation
24 provided for a school year described in sub-
25 section (a)(2) to the eligible entity if—

1 “(i) the entity finds the teacher not in
2 compliance with the Corps member re-
3 quirements described in subsection (c) and
4 the entity determines the teacher should no
5 longer be a member of the Corps for such
6 year; or

7 “(ii) the teacher withdraws during
8 such year from membership in the Corps
9 without an accepted excuse, as determined
10 by the eligible entity.

11 “(B) COMPENSATION RETURNED TO THE
12 TREASURY.—

13 “(i) IN GENERAL.—Except as pro-
14 vided in clause (ii), an eligible entity that
15 receives repaid compensation under sub-
16 paragraph (A) shall return such compensa-
17 tion to the United States Treasury.

18 “(ii) ADMINISTRATIVE COSTS.—An el-
19 igible entity that receives repaid compensa-
20 tion under subparagraph (A) may retain a
21 percentage, determined by the Secretary,
22 of such repayment to defray administrative
23 costs associated with the collection.

1 **“SEC. 2160. REPORT AND EVALUATION.**

2 “(a) ADMINISTRATIVE AND REPORTING COSTS.—Of
3 the amounts appropriated for this chapter for any fiscal
4 year, the Secretary may use not more than 6 percent of
5 the funds appropriated for such fiscal year for administra-
6 tive costs and report and evaluation costs under this sec-
7 tion, except that the Secretary may use not more than 3
8 percent of the funds appropriated for such fiscal year for
9 administrative costs.

10 “(b) REPORTS TO THE SECRETARY.—

11 “(1) IN GENERAL.—Each eligible entity receiv-
12 ing a grant under this chapter shall provide an an-
13 nual report to the Secretary that—

14 “(A) summarizes the activities assisted
15 under the grant and program outcomes; and

16 “(B) includes, with respect to each mem-
17 ber of the STEM Master Teacher Corps, the
18 following:

19 “(i) The name of the member.

20 “(ii) The school at which the member
21 teaches and the location of such school.

22 “(iii) The subject area the teacher
23 teaches.

24 “(iv) The grade level the teacher
25 teaches.

1 “(2) PUBLICATION.—Each eligible entity receiv-
2 ing a grant under this chapter shall publicize the in-
3 formation described in paragraph (1)(B).

4 “(c) IES EVALUATION.—The Secretary, acting
5 through the Director of the Institute of Education
6 Sciences, shall—

7 “(1) evaluate the implementation and impact of
8 the program under this chapter, particularly with re-
9 gard to the program’s success in achieving the pur-
10 pose described in section 2155;

11 “(2) identify optimal strategies for the design,
12 implementation, and continuing development of the
13 STEM Master Teacher Corps program; and

14 “(3) identify best practices for developing, sup-
15 porting, and retaining STEM teachers based on les-
16 sons learned from the program.

17 “(d) DISSEMINATION.—The Secretary shall dissemi-
18 nate findings from the evaluation conducted under sub-
19 section (c) to the STEM education field and make the
20 findings publicly available.

21 “(e) REPORTS TO CONGRESS.—Not later than 4
22 years after the establishment of the program under this
23 chapter, and not later than 2 years thereafter, the Sec-
24 retary shall prepare and submit to the Committee on Edu-
25 cation and the Workforce and the Committee on Science,

1 Space, and Technology of the House of Representatives
2 and the Committee on Commerce, Science, and Transpor-
3 tation and the Committee on Health, Education, Labor,
4 and Pensions of the Senate, a report that summarizes—

5 “(1) the activities assisted under the program
6 under this chapter;

7 “(2) the outcomes of the program; and

8 “(3) any recommendations regarding changes
9 to, the termination of, or the continuation and ex-
10 pansion of the program.

11 **“SEC. 2161. AUTHORIZATION OF APPROPRIATIONS.**

12 “There are authorized to be appropriated to carry out
13 this chapter \$35,000,000 for fiscal year 2012 and such
14 sums as may be necessary for each of the 4 succeeding
15 fiscal years.”.

○