

114TH CONGRESS  
1ST SESSION

# S. 867

To improve student academic achievement in science, technology, engineering,  
and mathematics subjects.

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IN THE SENATE OF THE UNITED STATES

MARCH 25, 2015

Mr. MERKLEY (for himself and Mr. FRANKEN) introduced the following bill;  
which was read twice and referred to the Committee on Health, Edu-  
cation, Labor, and Pensions

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## A BILL

To improve student academic achievement in science,  
technology, engineering, and mathematics subjects.

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 part may be cited as the “STEM Education for  
5 the Global Economy Act of 2015”.

1 **SEC. 2. IMPROVING SCIENCE, TECHNOLOGY, ENGINEERING,**  
2 **AND MATHEMATICS INSTRUCTION AND STU-**  
3 **DENT ACHIEVEMENT.**

4 Title IV of the Elementary and Secondary Education  
5 Act of 1965 (20 U.S.C. 7101 et seq.) is amended by add-  
6 ing at the end the following:

7 **“PART D—IMPROVING SCIENCE, TECHNOLOGY,**  
8 **ENGINEERING, AND MATHEMATICS IN-**  
9 **STRUCTION AND STUDENT ACHIEVEMENT**  
10 **“Subpart 1—Improving STEM Instruction and**  
11 **Student Achievement**

12 **“SEC. 4401. PURPOSE.**

13 “The purpose of this subpart is to improve student  
14 academic achievement in science, technology, engineering,  
15 and mathematics, including computer science, by—

16 “(1) improving instruction in such subjects  
17 through grade 12;

18 “(2) improving student engagement in, and in-  
19 creasing student access to, such subjects;

20 “(3) improving the quality and effectiveness of  
21 classroom instruction by recruiting, training, and  
22 supporting highly rated teachers and providing ro-  
23 bust tools and supports for students and teachers in  
24 such subjects; and

1           “(4) closing student achievement gaps, and pre-  
2           paring more students to be college and career ready  
3           in such subjects.

4 **“SEC. 4402. DEFINITIONS.**

5           “In this subpart:

6           “(1) ELIGIBLE ENTITY.—The term ‘eligible en-  
7           tity’ means—

8                   “(A) a State educational agency; or

9                   “(B) a State educational agency in part-  
10                  nership with 1 or more State educational agen-  
11                  cies.

12           “(2) ELIGIBLE SUBGRANTEE.—The term ‘eligi-  
13           ble subgrantee’ means—

14                   “(A) a high-need local educational agency;

15                   “(B) an educational service agency serving  
16                  more than 1 high-need local educational agency;

17                   “(C) a consortium of high-need local edu-  
18                  cational agencies; or

19                   “(D) an entity described in subparagraph  
20                  (A) or (C) of paragraph (3) that has signed a  
21                  memorandum of agreement with an entity de-  
22                  scribed in subparagraph (A), (B), or (C) of this  
23                  paragraph to implement the requirements of  
24                  this subpart in partnership with such entity.

1           “(3) OUTSIDE PARTNER.—The term ‘outside  
2 partner’ means an entity that has expertise and a  
3 demonstrated record of success in improving student  
4 learning and engagement in the identified subjects  
5 described in section 4404(b)(2), including any of the  
6 following:

7           “(A) A nonprofit or community-based or-  
8 ganization, which may include a cultural organi-  
9 zation, such as a museum or learning center.

10           “(B) A business.

11           “(C) An institution of higher education.

12           “(D) An educational service agency.

13           “(4) STATE.—The term ‘State’ means—

14           “(A) any of the 50 States;

15           “(B) the District of Columbia;

16           “(C) the Bureau of Indian Education; or

17           “(D) the Commonwealth of Puerto Rico.

18 **“SEC. 4403. GRANTS; ALLOTMENTS.**

19           “(a) RESERVATIONS.—

20           “(1) IN GENERAL.—From the amounts appro-  
21 priated for this part for a fiscal year, the Secretary  
22 shall reserve—

23           “(A) not more than 2 percent to provide  
24 technical assistance to States under this sub-  
25 part;

1           “(B) not more than 5 percent for State ca-  
2           capacity-building grants under this subpart, if the  
3           Secretary is awarding such grants in accord-  
4           ance with paragraph (2); and

5           “(C) 10 percent for the STEM Master  
6           Teacher Corps program under subpart 2.

7           “(2) CAPACITY-BUILDING GRANTS.—

8           “(A) IN GENERAL.—In any year for which  
9           funding is distributed competitively, as de-  
10          scribed in subsection (c)(1), the Secretary may  
11          award 1 capacity-building grant to each State  
12          that does not receive a grant under subsection  
13          (c), on a competitive basis, to enable such State  
14          to become more competitive in future years.

15          “(B) DURATION.—Grants awarded under  
16          subparagraph (A) shall be for a period of 1  
17          year.

18          “(b) FORMULA GRANTS.—

19          “(1) IN GENERAL.—For each fiscal year for  
20          which the amount appropriated to carry out this  
21          part, and not reserved under subsection (a)(1), is  
22          equal to or more than \$300,000,000, the Secretary  
23          shall award grants to States, based on the formula  
24          described in paragraph (2).

1           “(2) DISTRIBUTION OF FUNDS.—The Secretary  
2 shall allot to each State—

3           “(A) an amount that bears the same rela-  
4 tionship to 35 percent of the excess amount de-  
5 scribed in paragraph (1) as the number of indi-  
6 viduals ages 5 through 17 in the State, as de-  
7 termined by the Secretary on the basis of the  
8 most recent satisfactory data, bears to the num-  
9 ber of those individuals in all such States, as so  
10 determined; and

11           “(B) an amount that bears the same rela-  
12 tionship to 65 percent of the excess amount as  
13 the number of individuals ages 5 through 17  
14 from families with incomes below the poverty  
15 line in the State, as determined by the Sec-  
16 retary on the basis of the most recent satisfac-  
17 tory data, bears to the number of those individ-  
18 uals in all such States, as so determined.

19           “(3) FUNDING MINIMUM.—No State receiving  
20 an allotment under this subsection may receive less  
21 than one-half of 1 percent of the total amount allot-  
22 ted under paragraph (1) for a fiscal year.

23           “(4) PUERTO RICO.—The amount allotted  
24 under paragraph (2) to the Commonwealth of Puer-  
25 to Rico for a fiscal year may not exceed one-half of

1       1 percent of the total amount allotted under para-  
2       graph (1) for such fiscal year.

3           “(5) REALLOTMENT OF UNUSED FUNDS.—If a  
4       State does not successfully apply, the Secretary shall  
5       reallot the amount of the State’s allotment to the re-  
6       maining States in accordance with this subsection.

7           “(c) COMPETITIVE GRANTS.—

8           “(1) IN GENERAL.—For each fiscal year for  
9       which the amount appropriated to carry out this  
10      part, and not reserved under subsection (a)(1), is  
11      less than \$300,000,000, the Secretary shall award  
12      grants, on a competitive basis, to eligible entities to  
13      enable such eligible entities to carry out the activi-  
14      ties described in this subpart.

15          “(2) DURATION.—Grants awarded under this  
16      subsection shall be for a period of not more than 3  
17      years.

18          “(3) RENEWAL.—

19           “(A) IN GENERAL.—If an eligible entity  
20      demonstrates progress, as measured by the  
21      metrics described in section 4406(a), the Sec-  
22      retary may renew a grant for an additional 2-  
23      year period.

1                   “(B) REDUCED FUNDING.—Grant funds  
2                   awarded under subparagraph (A) shall be  
3                   awarded at a reduced amount.

4 **“SEC. 4404. APPLICATIONS.**

5                   “(a) IN GENERAL.—Each eligible entity or State de-  
6                   siring a grant under this subpart, whether through a com-  
7                   petitive grant under section 4403(c) or through an allot-  
8                   ment under section 4403(b), shall submit an application  
9                   to the Secretary at such time, in such manner, and accom-  
10                  panied by such information as the Secretary may require.

11                  “(b) CONTENTS.—At a minimum, an application sub-  
12                  mitted under subsection (a) shall include the following:

13                         “(1) A description of the needs, including as-  
14                         sets, identified by the State or eligible entity, based  
15                         on a State analysis, which—

16                                 “(A) may include results from a relevant  
17                                 pre-existing analysis of science, technology, en-  
18                                 gineering, and mathematics education quality  
19                                 and outcomes in the State or States served by  
20                                 the eligible entity;

21                                 “(B) shall include data for elementary  
22                                 school and secondary school grades, as applica-  
23                                 ble, to the extent that such data are available,  
24                                 on—



1 “(i) student achievement in science,  
2 technology, engineering, and mathematics;

3 “(ii) science, technology, engineering,  
4 and mathematics teacher evaluations;

5 “(iii) student access to mathematics  
6 and science courses needed to enroll in  
7 credit-bearing coursework at institutions of  
8 higher education in the State or States  
9 served by the eligible entity;

10 “(iv) access to science, technology, en-  
11 gineering, and mathematics courses for  
12 students through grade 12 who—

13 “(I) are eligible to receive a free  
14 or reduced priced lunch under the  
15 Richard B. Russell National School  
16 Lunch Act (42 U.S.C. 1751 et seq.);  
17 or

18 “(II) come from families with an  
19 income that is below the poverty line;

20 “(v) student achievement gaps in  
21 science, technology, engineering, and math-  
22 ematics subjects;

23 “(vi) the percentage of students who  
24 successfully—

- 1                   “(I) complete Advanced Place-  
2                   ment or International Baccalaureate  
3                   courses in science, technology, engi-  
4                   neering, and mathematics subjects; or  
5                   “(II) complete rigorous, credit-  
6                   bearing postsecondary education  
7                   courses in science, technology, engi-  
8                   neering, and mathematics subjects;  
9                   “(vii) available instructional systems  
10                  and supports, such as curricula, instruc-  
11                  tional materials, professional development,  
12                  teacher evaluation systems, and assess-  
13                  ments;  
14                  “(viii) science, technology, engineer-  
15                  ing, and mathematics teacher qualifica-  
16                  tions; and  
17                  “(ix) teacher shortages and teacher  
18                  distribution among local educational agen-  
19                  cies and schools in science, technology, en-  
20                  gineering, and mathematics subjects;  
21                  “(C) shall include labor market informa-  
22                  tion regarding the industry and business work-  
23                  force needs within the area served by the eligi-  
24                  ble entity;

1           “(D) shall include an analysis of the qual-  
2           ity of pre-service preparation at all public insti-  
3           tutions of higher education (including alter-  
4           native pathways to teacher licensure or certifi-  
5           cation) for individuals preparing to teach  
6           science, technology, engineering, and mathe-  
7           matics subjects in a preschool, elementary  
8           school, or secondary school in the State; and

9           “(E) shall include an analysis of the imple-  
10          mentation of any multi-tier systems of support  
11          that have been employed in the State or States  
12          served by the eligible entity to address the  
13          learning needs of students in any science, tech-  
14          nology, engineering, and mathematics subjects.

15          “(2) An identification of the specific science,  
16          technology, engineering, and mathematics subjects  
17          that the State or eligible entity will address through  
18          the activities described in section 4405, consistent  
19          with the needs identified under paragraph (1) (re-  
20          ferred to in this subpart as identified subjects).

21          “(3) A description, in a manner that addresses  
22          any needs identified under paragraph (1), of—

23                 “(A) how grant funds will be used by the  
24                 State or eligible entity to improve instruction in  
25                 identified subjects using evidence-based pro-

1           grams of instruction that are aligned with the  
2           college and career ready standards and aca-  
3           demic assessments;

4           “(B) how grant funds will be used to sup-  
5           port subgrantees and other high-need local edu-  
6           cational agencies in the employment of multi-  
7           tiered systems of support to provide early inter-  
8           vening services, as described in section  
9           613(a)(4)(A)(ii) of the Individuals with Disabil-  
10          ities Education Act, and to increase student  
11          achievement in identified subjects;

12          “(C) the process that the State or eligible  
13          entity will use for awarding subgrants, includ-  
14          ing how relevant stakeholders will be involved;

15          “(D) how the State’s or eligible entity’s ac-  
16          tivities and subgrants will be coordinated with  
17          other Federal, State, and local programs and  
18          activities, including career and technical edu-  
19          cation programs authorized under the Carl D.  
20          Perkins Career and Technical Education Act of  
21          2006 (20 U.S.C. 2301 et seq.);

22          “(E) the technical assistance that the  
23          State or eligible entity will provide to sub-  
24          grantees to support the activities undertaken by  
25          the subgrantees;

1           “(F) how the State or eligible entity will  
2 evaluate the activities funded, both at the State  
3 and subgrantee level, with funds provided under  
4 this subpart, and in a manner consistent with  
5 any evaluation activities carried out by the In-  
6 stitute of Education Sciences under section  
7 4407, or the National Science Foundation;

8           “(G) how the State or eligible entity will  
9 allocate funds in a manner that will provide  
10 services to both elementary schools and sec-  
11 ondary schools;

12           “(H) how the State or eligible entity will  
13 provide targeted support to improve instruction  
14 in high-need local educational agencies and  
15 high-need schools;

16           “(I) how the State or eligible entity’s pro-  
17 posed project will ensure an increase in access  
18 for students who are members of groups under-  
19 represented in science, technology, engineering,  
20 and mathematics subject fields to high-quality  
21 courses in 1 or more of the identified subjects;  
22 and

23           “(J) how the State or eligible entity will  
24 continue to involve stakeholders in education re-

1 form efforts related to science, technology, engi-  
2 neering, and mathematics instruction.

3 “(4) Assurances that the State or eligible entity  
4 will monitor implementation of approved subgrantee  
5 plans.

6 “(c) **ADDITIONAL FUNDING.**—A State or eligible en-  
7 tity that submits a request to use the additional State ac-  
8 tivities reservation described in section 4405(d)(2), shall  
9 provide, in a manner that addresses the needs identified  
10 under subsection (b)(1), a description of the activities that  
11 the eligible entity will carry out with such funds, con-  
12 sistent with section 4405.

13 **“SEC. 4405. AUTHORIZED ACTIVITIES.**

14 “(a) **REQUIRED ACTIVITIES.**—Each State or eligible  
15 entity that receives a grant under this subpart shall use  
16 the grant funds to carry out each of the following activi-  
17 ties:

18 “(1) Increasing access for students through  
19 grade 12 who are members of groups underrep-  
20 resented in science, technology, engineering, and  
21 mathematics subject fields to high-quality courses in  
22 the identified subjects.

23 “(2) Implementing evidence-based programs of  
24 instruction based on high-quality standards and as-  
25 sessments in the identified subjects.

1           “(3) Providing professional development and  
2 other comprehensive systems of support for teachers  
3 and school leaders to promote high-quality instruc-  
4 tion and instructional leadership in the identified  
5 subjects.

6           “(4) Providing technical assistance to sub-  
7 grantees and other high-need schools and local edu-  
8 cational agencies in order to improve student  
9 achievement and narrow achievement gaps in identi-  
10 fied subjects, including through—

11                   “(A) the development and implementation  
12 of multi-tier systems of support; and

13                   “(B) the development of curriculum or in-  
14 structional materials consistent with the prin-  
15 cipals of universal design for learning.

16           “(b) PERMISSIBLE ACTIVITIES.—Each State or eligi-  
17 ble entity that receives a grant under this subpart may  
18 use the grant funds to carry out 1 or more of the following  
19 activities:

20                   “(1) Recruiting qualified teachers and instruc-  
21 tional leaders who are trained in identified subjects,  
22 including teachers who have transitioned into the  
23 teaching profession from a career in science, tech-  
24 nology, engineering, and mathematics fields.

1           “(2) Recruiting and training teachers to teach  
2 dual credit and dual enrollment postsecondary-level  
3 courses to high school students in identified subjects.

4           “(3) Providing induction and mentoring serv-  
5 ices to new teachers in identified subjects.

6           “(4) Developing instructional supports, such as  
7 curricula and assessments, which shall be evidence-  
8 based and aligned with State college and career  
9 ready academic content standards, and may include  
10 Internet-based curricula and Internet-based instruc-  
11 tional supports.

12           “(5) Implementing an interdisciplinary ap-  
13 proach, by integrating instruction in 1 or more  
14 science, technology, engineering, and mathematics  
15 subjects with reading, English language arts, or in-  
16 struction in other core academic subjects and  
17 noncore academic subjects.

18           “(c) SUBGRANTS.—

19           “(1) IN GENERAL.—Each State or eligible enti-  
20 ty that receives a grant under this section shall  
21 award subgrants, on a competitive basis, to eligible  
22 subgrantees.

23           “(2) MINIMUM SUBGRANT.—A State or eligible  
24 entity shall award subgrants under this subsection  
25 that are of sufficient size and scope to support high-



1 quality, evidence-based, effective programs that are  
2 consistent with the purpose of this subpart.

3 “(3) SUBGRANTEE APPLICATION.—

4 “(A) IN GENERAL.—Each eligible sub-  
5 grantee desiring a subgrant under this sub-  
6 section shall submit an application to the State  
7 or eligible entity at such time, in such manner,  
8 and accompanied by such information as the  
9 State or eligible entity may require.

10 “(B) CONTENTS OF SUBGRANTEE APPLI-  
11 CATION.—At a minimum, the application de-  
12 scribed in subparagraph (A) shall include the  
13 following:

14 “(i) A description of the activities that  
15 the eligible subgrantee will carry out, and  
16 how such activities will improve teaching  
17 and student academic achievement in the  
18 identified subjects, in a manner consistent  
19 with scientifically valid research.

20 “(ii) A description of how the eligible  
21 subgrantee will use funds provided under  
22 this subsection to serve students and  
23 teachers in high-need schools.

24 “(iii) A description of how funds pro-  
25 vided under this subsection will be coordi-

1 nated with other Federal, State, and local  
2 programs and activities, including career  
3 and technical education programs author-  
4 ized under the Carl D. Perkins Career and  
5 Technical Education Act of 2006 (20  
6 U.S.C. 2301 et seq.).

7 “(iv) If the eligible subgrantee is  
8 working with outside partners, a descrip-  
9 tion of how such outside partners will be  
10 involved in improving instruction and in-  
11 creasing access to high-quality learning ex-  
12 periences in the identified subjects.

13 “(4) SUBGRANTEE USE OF FUNDS.—

14 “(A) REQUIRED USE OF FUNDS.—Each  
15 subgrantee under this subsection shall use the  
16 subgrant funds to carry out activities for stu-  
17 dents through grade 12, consistent with the ac-  
18 tivities described in the subgrantee’s applica-  
19 tion, which shall include—

20 “(i) high-quality teacher and instruc-  
21 tional leader recruitment, support, and  
22 evaluation in the identified subjects;

23 “(ii) professional development, which  
24 may include development and support for  
25 instructional coaches, to enable teachers

1 and instructional leaders to increase stu-  
2 dent achievement in identified subjects,  
3 through—

4 “(I) implementation of classroom  
5 assessments; and

6 “(II) differentiation of instruc-  
7 tion in identified subjects for all stu-  
8 dents, including for students who are  
9 children with disabilities and students  
10 who are English learners;

11 “(iii) activities to—

12 “(I) improve the content knowl-  
13 edge of teachers; and

14 “(II) facilitate professional col-  
15 laboration, which may include pro-  
16 viding time for such collaborations;

17 “(iv) the development, adoption, and  
18 improvement of high-quality curricula and  
19 instructional supports that—

20 “(I) are aligned with State col-  
21 lege and career ready academic con-  
22 tent standards; and

23 “(II) the eligible subgrantee will  
24 use to improve student academic  
25 achievement in identified subjects;

1           “(v) the development or improvement,  
2           and implementation, of multi-tier systems  
3           of support to provide early intervening  
4           services and to increase student achieve-  
5           ment in 1 or more of the identified sub-  
6           jects; and

7           “(vi) integrating instruction in the  
8           identified subjects with instruction in read-  
9           ing, English language arts, or other core  
10          and noncore academic subjects.

11          “(B) ALLOWABLE USE OF FUNDS.—In ad-  
12          dition to the required activities described in  
13          subparagraph (A), each eligible subgrantee that  
14          receives a subgrant under this subsection, may  
15          also use the subgrant funds to—

16               “(i) support the participation of un-  
17               derserved populations in nonprofit competi-  
18               tions related to science, technology, engi-  
19               neering, and mathematics subjects (such  
20               as robotics, science research, invention,  
21               mathematics, computer science, and tech-  
22               nology competitions);

23               “(ii) broaden secondary school stu-  
24               dents’ access to, and interest in, careers

1           that require academic preparation in 1 or  
2           more identified subjects; and

3           “(iii) broaden secondary school stu-  
4           dents’ access to early college high schools,  
5           dual enrollment, or concurrent enrollment  
6           courses in science, technology, engineering,  
7           and mathematics subjects, including pro-  
8           viding professional development to teachers  
9           and leaders related to this work.

10          “(C) LIMITATION.—Each subgrantee that  
11          receives a subgrant under this subsection shall  
12          not expend more than 15 percent of the  
13          subgrant funds on the activities described in  
14          subparagraph (B).

15          “(D) MATCHING FUNDS.—A State or eligi-  
16          ble entity shall require an eligible subgrantee  
17          receiving a subgrant under this subsection to  
18          demonstrate that such subgrantee has obtained  
19          a commitment from 1 or more outside partners  
20          to match, using non-Federal funds or in-kind  
21          contributions, not less than 15 percent of the  
22          amount of subgrant funds. In the case of sig-  
23          nificant financial hardship, an eligible sub-  
24          grantee may apply to the State or eligible entity  
25          for, and the State or eligible entity may grant,

1 a waiver of a portion of the minimum matching  
2 funds requirement.

3 “(d) STATE ACTIVITIES.—

4 “(1) IN GENERAL.—Each State or eligible enti-  
5 ty that receives a grant under this subpart may use  
6 not more than 5 percent of grant funds for—

7 “(A) administrative costs;

8 “(B) monitoring the implementation of  
9 subgrants;

10 “(C) providing technical assistance to sub-  
11 grantees; and

12 “(D) evaluating subgrants in coordination  
13 with the evaluation described in section 4407.

14 “(2) RESERVATION.—Each State or eligible en-  
15 tity that receives a grant under this subpart may  
16 submit a request to the Secretary to reserve not  
17 more than 15 percent of grant funds, inclusive of  
18 the amount described in paragraph (1), for addi-  
19 tional State activities, consistent with subsections  
20 (a) and (b).

21 **“SEC. 4406. PERFORMANCE METRICS; REPORT.**

22 “(a) ESTABLISHMENT OF PERFORMANCE  
23 METRICS.—The Secretary, acting through the Director of  
24 the Institute of Education Sciences, shall establish per-

1 formance metrics to evaluate the effectiveness of the ac-  
2 tivities carried out under this subpart.

3 “(b) ANNUAL REPORT.—Each State or eligible entity  
4 that receives a grant under this subpart shall prepare and  
5 submit an annual report to the Secretary, which shall in-  
6 clude information relevant to the performance metrics de-  
7 scribed in subsection (a).

8 **“SEC. 4407. EVALUATION.**

9 “From the amount reserved in accordance with sec-  
10 tion 9601, the Secretary shall—

11 “(1) acting through the Director of the Insti-  
12 tute of Education Sciences, and in consultation with  
13 the Director of the National Science Foundation—

14 “(A) evaluate the implementation and im-  
15 pact of the activities supported under this sub-  
16 part, including progress measured by the  
17 metrics established under section 4406(a); and

18 “(B) identify best practices to improve in-  
19 struction in science, technology, engineering,  
20 and mathematics subjects; and

21 “(2) disseminate, in consultation with the Na-  
22 tional Science Foundation, research on best prac-  
23 tices to improve instruction in science, technology,  
24 engineering, and mathematics subjects.

1 **“SEC. 4408. SUPPLEMENT NOT SUPPLANT.**

2 “Funds received under this subpart shall be used to  
3 supplement, and not supplant, funds that would otherwise  
4 be used for activities authorized under this subpart.

5 **“SEC. 4409. MAINTENANCE OF EFFORT.**

6 “A State that receives funds under this subpart for  
7 a fiscal year shall maintain the fiscal effort provided by  
8 the State for the subjects supported by the funds under  
9 this part at a level equal to or greater than the level of  
10 such fiscal effort for the preceding fiscal year.

11 **“Subpart 2—STEM Master Teacher Corps Program**

12 **“SEC. 4421. PURPOSE.**

13 “The purpose of this subpart is to establish a STEM  
14 Master Teacher Corps program that—

15 “(1) elevates the status of the STEM teaching  
16 profession by recognizing and rewarding outstanding  
17 STEM teachers;

18 “(2) attracts and retains effective STEM teach-  
19 ers, particularly in high-need schools, by offering  
20 them additional compensation, instructional re-  
21 sources, and instructional leadership roles; and

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

24 “(A) share best practices and resources;

25 “(B) take on leadership responsibilities in  
26 their schools, districts, States (if part of the



1 participating area), or consortia with the au-  
 2 thority to provide professional support to their  
 3 STEM colleagues not participating in the  
 4 STEM Master Teacher Corps;

5 “(C) aid in the development and retention  
 6 of beginning teachers by serving as their role  
 7 models and providing them with instructional  
 8 support; and

9 “(D) inform the development of STEM  
 10 education policy.

11 **“SEC. 4422. DEFINITIONS.**

12 “In this subpart:

13 “(1) ELIGIBLE ENTITY.—The term ‘eligible en-  
 14 tity’ means a consortium of high-need local edu-  
 15 cational agencies or 1 or more State educational  
 16 agencies, acting in partnership with 1 or more—

17 “(A) institutions of higher education; or

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

21 “(2) PARTICIPATING AREA.—The term ‘partici-  
 22 pating area’ means—

23 “(A) in the case of an eligible entity that  
 24 includes a State educational agency or consor-

1           tium of State educational agencies, the State or  
2           States; or

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

6           “(3) RURAL SCHOOL.—The term ‘rural school’  
7           means a public school—

8           “(A) designated with a school locale code  
9           of Distant Town, Remote Town, Fringe Rural,  
10          Distant Rural, or Remote Rural; and

11          “(B) served by a local educational agency  
12          in which not less than two-thirds of the stu-  
13          dents served by the agency attend a school des-  
14          ignated with 1 of the school locale codes listed  
15          in subparagraph (A).

16          “(4) STEM.—The term ‘STEM’ means science,  
17          technology, engineering, and mathematics, including  
18          computer science.

19   **“SEC. 4423. STEM MASTER TEACHER CORPS PROGRAM.**

20          “(a) IN GENERAL.—

21               “(1) GRANTS AUTHORIZED.—From the amount  
22               reserved under section 4403(a)(1)(C), the Secretary,  
23               in consultation with the Director of the National  
24               Science Foundation and the heads of other appro-  
25               priate Federal agencies, as determined by the Sec-

1       retary, shall establish a STEM Master Teacher  
2       Corps program by awarding, on a competitive basis,  
3       1 or more grants of not less than \$15,000,000 each  
4       to eligible entities to enable the eligible entities to  
5       establish the program, in accordance with section  
6       4425.

7               “(2) PLANNING GRANTS.—The Secretary may  
8       award planning grants to eligible entities to enable  
9       the entities to make plans to establish the program,  
10      in accordance with section 4425.

11      “(b) DURATION OF GRANT.—

12               “(1) IN GENERAL.—A grant awarded under  
13      this subpart shall be for a period of not more than  
14      5 years.

15               “(2) REVIEW.—The Secretary shall—

16                       “(A) review, 3 years after an eligible entity  
17      is awarded a grant under this subpart, the per-  
18      formance of the entity during the 3-year period;  
19      and

20                       “(B) fund the remaining grant period for  
21      such entity if the Secretary determines, based  
22      on such review, that the entity is achieving sat-  
23      isfactory results.

24      “(c) MATCHING REQUIREMENT.—

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

8           “(2) EXCEPTION.—

9           “(A) IN GENERAL.—The Secretary may  
10          waive the 50-percent matching requirement  
11          under paragraph (1) for an eligible entity that  
12          the Secretary determines is unable to meet such  
13          requirement. The Secretary shall set a match-  
14          ing requirement for such eligible entities ac-  
15          cording to the sliding scale described in sub-  
16          paragraph (B).

17          “(B) SLIDING SCALE.—The amount of a  
18          match under subparagraph (A) shall be estab-  
19          lished based on a sliding fee scale that takes  
20          into account—

21                  “(i) the relative poverty of the popu-  
22                  lation to be targeted by the eligible entity;  
23                  and

24                  “(ii) the ability of the eligible entity to  
25                  obtain such matching funds.

1           “(3) CONSIDERATION.—The Secretary shall not  
2           consider an eligible entity’s ability to match funds  
3           when determining which eligible entities will receive  
4           grant awards under this subpart.

5   **“SEC. 4424. APPLICATION.**

6           “(a) IN GENERAL.—An eligible entity desiring a  
7           grant under this subpart shall submit an application to  
8           the Secretary at such time, in such manner, and con-  
9           taining such information as the Secretary may require.

10          “(b) CONTENTS.—An application submitted under  
11          this section shall include—

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

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

1           “(3) a demonstration that the entity has suffi-  
2           cient capacity to carry out the activities described in  
3           section 4425;

4           “(4) a description of the member selection proc-  
5           ess and criteria that the applicant will use to select  
6           members of the STEM Master Teacher Corps, in ac-  
7           cordance with section 4425(b);

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

17          “(6) a demonstration that the entity has a clear  
18          plan for—

19                 “(A) offering research-based professional  
20                 development to Corps members, including train-  
21                 ing on instructional leadership, mentoring, en-  
22                 gaging and effectively teaching historically  
23                 underachieving or underrepresented groups in  
24                 STEM fields, such as girls, minorities, low-in-  
25                 come students, English learners, and students

1           who are children with disabilities, and effective  
2           STEM teaching methods, such as incorporating  
3           hands-on STEM projects into their lesson  
4           plans; and

5                 “(B) tracking the effectiveness of such  
6           professional development;

7                 “(7) a demonstration that the entity has a clear  
8           plan for evaluating the impact of the professional  
9           support provided by STEM Master Teacher Corps  
10          members to other teachers in their school, district,  
11          and participating area;

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

18                “(9) an explanation of how STEM Master  
19          Teacher Corps members will be afforded the time,  
20          authority, and resources to fulfill requirements  
21          under the program, and how other teachers will be  
22          afforded the time to receive professional support  
23          from Corps members;

24                “(10) a demonstration that the entity has a  
25          clear plan for oversight to ensure that STEM Mas-

1 ter Teacher Corps members carry out the respon-  
2 sibilities described in section 4425(c) to the fullest  
3 extent practicable, and a description of the actions  
4 to be taken if a member does not carry out such re-  
5 sponsibilities; and

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

8 “(c) CRITERIA FOR AWARDING GRANTS.—

9 “(1) IN GENERAL.—The Secretary shall award  
10 grants under this subpart on the basis of merit con-  
11 sidering, at a minimum, the following:

12 “(A) The extent to which the local edu-  
13 cational agencies that are part of the eligible  
14 entity are committed to integrating the pro-  
15 gram into existing school structures, policies,  
16 operations, and budgets, such as by enabling  
17 STEM Master Teacher Corps members to take  
18 on leadership roles in their schools, districts,  
19 and participating area, in addition to their  
20 classroom duties, including assisting in the de-  
21 velopment and implementation of professional  
22 development activities and driving the instruc-  
23 tional program of the school.

24 “(B) The quality of the proposed profes-  
25 sional development, teacher leadership and



1 mentorship activities, and networking opportu-  
2 nities.

3 “(C) Demonstration that the local edu-  
4 cational agencies and schools they serve have  
5 removed barriers to full participation in the  
6 program, including affording Corps members  
7 and the teachers they mentor the time to par-  
8 ticipate in activities required by the program.

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

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

13 “(2) PRIORITY.—In awarding grants under this  
14 subpart, the Secretary shall give priority to—

15 “(A) eligible entities that intend to include  
16 large numbers of teachers in the STEM Master  
17 Teacher Corps; and

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

21 **“SEC. 4425. REQUIRED USE OF FUNDS.**

22 “(a) IN GENERAL.—An eligible entity receiving a  
23 grant under this subpart shall use grant funds to—

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

4           “(2) provide compensation to each public school  
5 teacher who is selected and serves as a member of  
6 the STEM Master Teacher Corps, in recognition of  
7 the teacher’s teaching accomplishments, leadership,  
8 and increased responsibilities, which amount shall—

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

11           “(B) be equal to—

12           “(i) in the case of a teacher who  
13 teaches at a high-need public school, in-  
14 cluding a high-need charter school,  
15 \$15,000 per year for each year the teacher  
16 serves as a member of the Corps; and

17           “(ii) in the case of a teacher who  
18 teaches at a public school, including a  
19 charter school, that is not a high-need  
20 school, \$5,000 per year for each year the  
21 teacher serves as a member of the Corps;

22           “(3) provide research-based professional devel-  
23 opment activities for members of the STEM Master  
24 Teacher Corps, as described in section 4424(b)(6),  
25 and track the effectiveness of such professional de-

1       velopment in order to determine whether to alter  
2       professional development activities;

3               “(4) provide discretionary resources for STEM  
4       Master Teacher Corps members at high-need public  
5       schools to use in their classrooms and schools, in-  
6       cluding for after school activities to enrich STEM  
7       education and for equipment and technology to fa-  
8       cilitate long distance networking, mentoring, and  
9       sharing of best practices;

10              “(5) assist in coordinating instructional leader-  
11       ship roles for STEM Master Teacher Corps mem-  
12       bers and mentoring relationships between STEM  
13       Master Teacher Corps members and other teachers  
14       in the same school, school district, and participating  
15       area in which the Corps members serve as instruc-  
16       tional leaders;

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

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

23              “(8) support other activities that advance the  
24       purpose of this subpart.

1       “(b) SELECTING MEMBERS OF THE STEM MASTER  
2 TEACHER CORPS.—

3               “(1) SELECTION CRITERIA FOR CORPS MEM-  
4 BERS.—The eligible entity shall select, as members  
5 of the STEM Master Teacher Corps, exemplary  
6 STEM teachers at the elementary school and sec-  
7 ondary school levels who teach in the participating  
8 area, which may also include special education  
9 teachers and teachers of English learners who teach  
10 a STEM subject. In selecting the members, the eligi-  
11 ble entity shall—

12                       “(A) make decisions based on the teach-  
13 er’s—

14                               “(i) ability to improve student aca-  
15 demic achievement in the STEM fields, as  
16 demonstrated by, if applicable, student  
17 academic growth in such fields;

18                               “(ii) ability to enhance student en-  
19 gagement in such fields; and

20                               “(iii) record of leadership in the  
21 teacher’s school and involvement in profes-  
22 sional and outreach activities; and

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

1 “(i) teacher evaluations of pedagogical  
2 skills;

3 “(ii) an assessment of content knowl-  
4 edge;

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

7 “(iv) demonstration of practical pro-  
8 fessional experience in the teacher’s dis-  
9 cipline, such as having worked in industry  
10 or research;

11 “(v) involvement in STEM discipline  
12 professional societies;

13 “(vi) STEM outreach and community  
14 involvement; and

15 “(vii) certification by the National  
16 Board for Professional Teaching Stand-  
17 ards, or other equivalently rigorous, per-  
18 formance-based, peer-reviewed certification,  
19 as a high-performing teacher.

20 “(2) OVERALL CORPS MEMBERSHIP REQUIRE-  
21 MENTS.—An eligible entity receiving a grant under  
22 this subpart shall ensure that—

23 “(A) not more than 5 percent of the  
24 STEM teachers who teach in the participating  
25 area are members of the Corps;

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

4           “(C) the proportion of STEM Master  
5           Teacher Corps members in the participating  
6           area who teach at rural high-need schools is not  
7           less than the proportion of all teachers who  
8           teach at rural high-need schools in the partici-  
9           pating area;

10           “(D) there are multiple cohorts of STEM  
11           Master Teacher Corps members; and

12           “(E) the STEM Master Teacher Corps in-  
13           cludes teachers from each of the disciplines of  
14           science, technology, engineering, and mathe-  
15           matics, if teachers from each of these dis-  
16           ciplines meeting the standards of Corps mem-  
17           bership are available in the participating area  
18           and may include teachers of career and tech-  
19           nical education.

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

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

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

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

18               “(1) participating in professional development  
19               activities offered by the program;

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

23               “(3) contributing to the professional develop-  
24               ment of the teacher’s colleagues, which may include  
25               providing school-based professional support to other

1 STEM teachers through regular weekly professional  
2 development sessions and individual coaching, where  
3 possible, leading professional learning communities,  
4 and taking on other instructional leadership roles in  
5 the teacher’s school, district, State, if part of the  
6 participating area, or consortium.

7 “(d) COLLECTION FOR NONCOMPLIANCE.—

8 “(1) MONITORING COMPLIANCE.—Each eligible  
9 entity that receives a grant under this subpart shall  
10 monitor whether each teacher the entity selects to be  
11 a member of the STEM Master Teacher Corps is in  
12 compliance with the Corps member requirements de-  
13 scribed in subsection (c).

14 “(2) COLLECTION OF REPAYMENT.—

15 “(A) IN GENERAL.—A teacher selected to  
16 be a member of the STEM Master Teacher  
17 Corps shall repay the additional compensation  
18 provided for a school year described in sub-  
19 section (a)(2) to the eligible entity if—

20 “(i) the entity finds the teacher not in  
21 compliance with the Corps member re-  
22 quirements described in subsection (c) and  
23 the entity determines the teacher should no  
24 longer be a member of the Corps for such  
25 year; or



1           “(ii) the teacher withdraws during  
2           such year from membership in the Corps  
3           without an accepted excuse, as determined  
4           by the eligible entity.

5           “(B) COMPENSATION RETURNED TO THE  
6           TREASURY.—

7           “(i) IN GENERAL.—Except as pro-  
8           vided in clause (ii), an eligible entity that  
9           receives repaid compensation under sub-  
10          paragraph (A) shall return such compensa-  
11          tion to the United States Treasury.

12          “(ii) ADMINISTRATIVE COSTS.—An el-  
13          igible entity that receives repaid compensa-  
14          tion under subparagraph (A) may retain a  
15          percentage, determined by the Secretary,  
16          of such repayment to defray administrative  
17          costs associated with the collection.

18   **“SEC. 4426. PERFORMANCE METRICS; REPORT.**

19          “(a) ESTABLISHMENT OF PERFORMANCE  
20          METRICS.—The Secretary, acting through the Director of  
21          the Institute of Education Sciences, shall establish per-  
22          formance metrics to evaluate the effectiveness of the ac-  
23          tivities carried out under this subpart.

24          “(b) ANNUAL REPORT.—Each eligible entity that re-  
25          ceives a grant under this subpart shall prepare and submit

1 an annual report to the Secretary, which shall include in-  
2 formation relevant to the performance metrics described  
3 in subsection (a).

4 **“SEC. 4427. SUPPLEMENT NOT SUPPLANT.**

5 “Funds received under this subpart shall be used to  
6 supplement, and not supplant, funds that would otherwise  
7 be used for activities authorized under this subpart.

8 **“SEC. 4428. EVALUATION.**

9 “From the amount reserved in accordance with sec-  
10 tion 9601, the Secretary shall—

11 “(1) acting through the Director of the Insti-  
12 tute of Education Sciences, and in consultation with  
13 the Director of the National Science Foundation—

14 “(A) evaluate the implementation and im-  
15 pact of the activities supported under this sub-  
16 part, with regard to the program’s success in  
17 achieving the purpose described in section 4421;

18 “(B) identify optimal strategies for the de-  
19 sign, implementation, and continuing develop-  
20 ment of the STEM Master Teacher Corps pro-  
21 gram; and

22 “(C) identify best practices for developing,  
23 supporting, and retaining STEM teachers based  
24 on lessons learned from the STEM Master  
25 Teacher Corps program; and

1           “(2) disseminate findings from the evaluation  
2           conducted under paragraph (1) to the STEM edu-  
3           cation field and make the findings publicly avail-  
4           able.”.

○