

112TH CONGRESS  
1ST SESSION

# H. R. 2253

To establish within the Department of Education the Innovation Inspiration school grant program, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JUNE 21, 2011

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

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## A BILL

To establish within the Department of Education the Innovation Inspiration school grant program, and for other purposes.

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

3       **SECTION 1. FINDINGS.**

4       Congress makes the following findings:

5               (1) According to the National Science Board's  
6       2008 Science and Engineering Indicators, only 5  
7       percent of American college graduates major in engi-  
8       neering, compared with 13 percent of European stu-  
9       dents and 20 percent of students in Asia.

1           (2) Although United States fourth graders  
2           score well against international competition, United  
3           States students fall near the bottom or dead last by  
4           12th grade in mathematics and science, respectively.

5           (3) Admissions requirements for undergraduate  
6           engineering schools include a solid background in  
7           mathematics (algebra, geometry, trigonometry, and  
8           calculus) and science (biology, chemistry, and phys-  
9           ics), in addition to courses in English, social studies,  
10          and humanities.

11          (4) According to the Bureau of Labor Statis-  
12          tics, overall engineering employment is expected to  
13          grow by 11 percent over the 2008 through 2018 dec-  
14          ade, and, as a group, engineers earn some of the  
15          highest average starting salaries among individuals  
16          holding bachelor's degrees.

17          (5) According to the Department of Labor, en-  
18          gineers should be creative, inquisitive, analytical,  
19          and detail-oriented. Engineers should be able to  
20          work as part of a team and to communicate well,  
21          both orally and in writing. Communication abilities  
22          are becoming increasingly important as engineers  
23          interact more frequently with specialists in a wide  
24          range of fields outside engineering.

1           (6) Exposure to project- and problem-based  
2 learning, in a competitive team environment, gives  
3 9th through 12th graders the skills the students  
4 need to be successful in engineering programs of  
5 study and engineering careers.

6           (7) According to Brandeis University’s Center  
7 for Youth and Communities, participants in FIRST  
8 Robotics (a nonprofit organization that inspires  
9 young people to be science and technology leaders by  
10 engaging the young people in mentor-based pro-  
11 grams)—

12                   (A) are more likely to attend college full-  
13 time than nonparticipants (88 percent versus  
14 53 percent);

15                   (B) are nearly 2 times as likely to major  
16 in a science or engineering field; and

17                   (C) are more than 3 times as likely to have  
18 majored specifically in engineering.

19 **SEC. 2. DEFINITIONS.**

20 In this Act:

21           (1) **ELIGIBLE ENTITY.**—The term “eligible enti-  
22 ty” means—

23                   (A) a local educational agency; or

24                   (B) if a local educational agency chooses  
25 not to apply for a grant under this Act, a sec-

1           ondary school served by the nonapplying local  
2           educational agency.

3           (2) LOCAL EDUCATIONAL AGENCY.—The term  
4           “local educational agency” has the meaning given  
5           the term in section 9101 of the Elementary and Sec-  
6           ondary Education Act of 1965 (20 U.S.C. 7801).

7           (3) POVERTY LINE.—The term “poverty line”  
8           has the meaning given the term in section 9101 of  
9           the Elementary and Secondary Education Act of  
10          1965.

11          (4) SECONDARY SCHOOL.—The term “sec-  
12          ondary school” has the meaning given the term in  
13          section 9101 of the Elementary and Secondary Edu-  
14          cation Act of 1965.

15          (5) SECRETARY.—The term “Secretary” means  
16          the Secretary of Education.

17          (6) STEM.—The term “STEM” means science,  
18          technology, engineering, or mathematics.

19 **SEC. 3. INNOVATIVE INSPIRATION SCHOOL GRANT PRO-**  
20 **GRAM.**

21          (a) GOALS OF PROGRAM.—The goals of the Innova-  
22          tion Inspiration grant program are—

23                  (1) to provide opportunities for eligible entities  
24                  to support non-traditional STEM education teaching  
25                  methods;

1           (2) to support the participation of students in  
2 nonprofit robotics or STEM competitions;

3           (3) to foster innovation and broaden interest in  
4 and access to careers in the STEM fields by invest-  
5 ing in programs supported by teachers and profes-  
6 sional mentors who receive hands-on training and  
7 ongoing communications that strengthen the inter-  
8 actions of the teachers and mentors with—

9                   (A) students on competitive robotics or  
10                   STEM teams; and

11                   (B) other students in the STEM class-  
12                   rooms and communities of the teachers and  
13                   mentors; and

14           (4) to encourage the collaboration among stu-  
15           dents, engineers, and professional mentors to design,  
16           build, program, and compete in challenges with so-  
17           phisticated robots.

18           (b) PROGRAM AUTHORIZED.—

19                   (1) IN GENERAL.—The Secretary is authorized  
20           to award grants, on a competitive basis, to eligible  
21           entities to enable the eligible entities—

22                           (A) to promote STEM in secondary  
23                           schools;

1 (B) to support the participation of sec-  
2 ondary school students in robotics or STEM  
3 competitions; and

4 (C) to broaden secondary school students'  
5 access to careers in STEM.

6 (2) DURATION.—The Secretary shall award  
7 each grant under this Act for a period of not more  
8 than 5 years.

9 (3) AMOUNTS.—The Secretary shall award a  
10 grant under this Act in an amount that is sufficient  
11 to carry out the goals of this Act.

12 (c) APPLICATION.—

13 (1) IN GENERAL.—Each eligible entity desiring  
14 a grant under this Act shall submit an application  
15 to the Secretary at such time, in such manner, and  
16 containing such information as the Secretary may  
17 reasonably require.

18 (2) CONTENTS.—The application shall, at a  
19 minimum, include a description of how the eligible  
20 entity will—

21 (A) carry out each of the elements of a ro-  
22 botics or STEM competition described in sub-  
23 paragraphs (B) through (F) of subsection  
24 (d)(1);

1 (B) establish robotics or STEM competi-  
2 tion programs to inspire students in grades 9  
3 through 12 to become innovators in STEM;

4 (C) identify and recruit mentors for the  
5 programs described in subparagraph (B) and  
6 the participants in the programs;

7 (D) support teachers who lead the pro-  
8 grams and participants in the programs  
9 through stipends or other incentives;

10 (E) recruit young women and individuals  
11 from populations traditionally underrepresented  
12 in the STEM fields to participate in the pro-  
13 grams;

14 (F) identify public and private partners  
15 that can support the programs with cash or in-  
16 kind contributions;

17 (G) plan for sustaining the programs fi-  
18 nancially beyond the grant period; and

19 (H) evaluate the grant project and the re-  
20 sults of the grant project among participating  
21 students, including—

22 (i) comparing students who partici-  
23 pate in the grant project to similar stu-  
24 dents who do not so participate; and

25 (ii) evaluating—

1 (I) secondary school graduation  
2 rates;

3 (II) college-going rates;

4 (III) the number of students tak-  
5 ing advanced STEM related secondary  
6 school classes; and

7 (IV) the ability of students par-  
8 ticipating in the grant project to part-  
9 ner with professional mentors.

10 (3) PREFERENCE.—In developing the criteria  
11 for grant awards under this Act, the Secretary shall  
12 give preference to an application that addresses the  
13 needs of—

14 (A) a rural or urban school;

15 (B) a low-performing school or school dis-  
16 trict; or

17 (C) a local educational agency or school  
18 that serves—

19 (i) not fewer than 10,000 children  
20 from families with incomes below the pov-  
21 erty line; or

22 (ii) a student population not less than  
23 20 percent of whom are from families with  
24 incomes below the poverty line.

25 (d) USES OF FUNDS.—



1           (1) IN GENERAL.—Each eligible entity that re-  
2           ceives a grant under this Act may use the grant  
3           funds for the following:

4                   (A) STEM EDUCATION AND CAREER AC-  
5                   TIVITIES.—Promotion of STEM education and  
6                   career activities.

7                   (B) PURCHASE OF PARTS.—The purchase  
8                   of parts required to support participation in  
9                   team robotics or STEM competitions.

10                  (C) TEACHER INCENTIVES AND STI-  
11                  PENDS.—Incentives and stipends for teachers  
12                  involved in robotics or STEM competitions.

13                  (D) SUPPORT AND EXPENSES.—Support  
14                  and expenses for participation in regional and  
15                  national robotics or STEM competitions.

16                  (E) ADDITIONAL MATERIALS AND SUP-  
17                  PORT.—Additional materials and support, such  
18                  as equipment, facility use, and other expenses,  
19                  directly associated with robotics or STEM com-  
20                  petitions.

21                  (F) EVALUATION.—Carrying out the eval-  
22                  uation described in subsection (c)(2)(H).

23           (2) NONPROFIT COMPETITIONS.—Grant funds  
24           made available under this Act for robotics or STEM

1 competitions shall only be used to support participa-  
2 tion in nonprofit robotics or STEM competitions.

3 (3) ADMINISTRATIVE COSTS.—Each eligible en-  
4 tity that receives a grant under this Act may use not  
5 more than 2 percent of the grant funds for adminis-  
6 trative costs related to the administration of the  
7 project supported by the grant.

8 (e) MATCHING REQUIREMENT.—

9 (1) IN GENERAL.—Subject to paragraph (2),  
10 each eligible entity that receives a grant under this  
11 Act shall secure, toward the cost of the activities as-  
12 sisted under the grant, from non-Federal sources, an  
13 amount equal to 50 percent of the grant. The non-  
14 Federal contribution may be provided in cash or in  
15 kind.

16 (2) WAIVER.—The Secretary may waive all or  
17 part of the matching requirement described in para-  
18 graph (1) for an eligible entity if the Secretary de-  
19 termines that applying the matching requirement  
20 would result in a serious financial hardship or a fi-  
21 nancial inability to carry out the goals of the grant  
22 project.

23 (f) SUPPLEMENT, NOT SUPPLANT.—Grant funds  
24 provided to an eligible entity under this Act shall be used

1 to supplement, and not supplant, funds that would other-  
2 wise be used for activities authorized under this Act.

3 (g) SECRETARY'S ACTIVITIES.—

4 (1) COMMUNICATIONS AND OUTREACH PRO-  
5 GRAM.—From amounts appropriated to carry out  
6 this Act for a fiscal year, the Secretary shall estab-  
7 lish a communications and outreach program to pub-  
8 licize—

9 (A) non-traditional teaching methods appli-  
10 cable to STEM; and

11 (B) the availability and application proce-  
12 dure for the grant program established by this  
13 Act.

14 (2) GRANT EVALUATION PROGRAM.—The Sec-  
15 retary shall establish an evaluation program to de-  
16 termine the efficacy of the grant program estab-  
17 lished by this Act, which shall include assessing the  
18 impact, of student participation in the grant project  
19 assisted under this Act, on future course-taking and  
20 postsecondary study, by comparing students so par-  
21 ticipating to similar students who do not so partici-  
22 pate.

23 (3) STEM EVALUATION PROGRAM.—

24 (A) EVALUATION.—The Secretary shall  
25 evaluate existing Federal STEM education pro-

1           grams to determine whether there are any du-  
2           plicative programs.

3           (B) REPORTS.—Upon completing the eval-  
4           uation—

5                   (i) the Secretary shall submit to Con-  
6                   gress, a report on the results of the evalua-  
7                   tion, including recommendations on con-  
8                   solidating existing, duplicative Federal  
9                   STEM education programs; and

10                   (ii) the Director of the Office of Man-  
11                   agement and Budget shall submit to Con-  
12                   gress, a report on the savings resulting  
13                   from carrying out the Secretary’s rec-  
14                   ommendations under clause (i).

15           (h) FUNDING.—This Act shall be revenue neutral.

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