

112TH CONGRESS
1ST SESSION

H. R. 2247

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

IN THE HOUSE OF REPRESENTATIVES

JUNE 21, 2011

Mr. RYAN of Ohio (for himself and Mr. LANGEVIN) introduced the following bill; which was referred to the Committee on Education and the Workforce

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. SHORT TITLE.**

4 This Act may be cited as the “Innovation Inspiration
5 School Grant Program Act”.

6 **SEC. 2. FINDINGS.**

7 Congress makes the following findings:

8 (1) According to the National Science Board’s
9 2010 Science and Engineering Indicators, only 5
10 percent of American college graduates major in engi-

1 neering. In Asia, about 20 percent of all bacca-
2 laureate degrees are in engineering and in China
3 about 33 percent of baccalaureate degrees are in en-
4 gineering.

5 (2) Although 4th graders in the United States
6 score well against international competition, stu-
7 dents in the United States fall near the bottom or
8 dead last by 12th grade in mathematics and science,
9 respectively.

10 (3) Admissions requirements for undergraduate
11 engineering schools include a solid background in
12 mathematics (algebra, geometry, trigonometry, and
13 calculus) and science (biology, chemistry, and phys-
14 ics), in addition to courses in English, social studies,
15 and humanities.

16 (4) According to the Bureau of Labor Statis-
17 tics, overall engineering employment is expected to
18 grow by 11 percent from 2008 through 2018, and,
19 as a group, engineers earn some of the highest aver-
20 age starting salaries among individuals holding bac-
21 calaureate degrees.

22 (5) According to the Department of Labor, en-
23 gineers should be creative, inquisitive, analytical,
24 and detail-oriented. Engineers should be able to
25 work as part of a team and to communicate well,

1 both orally and in writing. Communication abilities
2 are becoming increasingly important as engineers
3 interact more frequently with specialists in a wide
4 range of fields outside engineering.

5 (6) Exposure to project- and problem-based
6 learning, in a competitive team environment, gives
7 9th through 12th graders the skills that they need
8 to be successful in engineering programs of study
9 and engineering careers.

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

16 (A) are more likely than nonparticipants to
17 attend an institution of higher education on a
18 full-time basis (88 percent versus 53 percent);

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

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

23 **SEC. 3. DEFINITIONS.**

24 In this Act:

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

5 (2) LOW-INCOME STUDENT.—The term “low-in-
6 come student” means a student who is eligible for
7 free or reduced price lunch under the Richard B.
8 Russell National School Lunch Act (42 U.S.C. 1751
9 et seq.).

10 (3) SECONDARY SCHOOL.—The term “sec-
11 ondary school” has the meaning given the term in
12 section 9101 of the Elementary and Secondary Edu-
13 cation Act of 1965 (20 U.S.C. 7801).

14 (4) SECRETARY.—The term “Secretary” means
15 the Secretary of Education.

16 (5) STEM.—The term “STEM” means science,
17 technology, engineering (including robotics), or
18 mathematics.

19 (6) NON-TRADITIONAL STEM TEACHING METH-
20 OD.—The term “non-traditional STEM teaching
21 method” means a STEM education method or strat-
22 egy such as incorporating self-directed student learn-
23 ing, inquiry-based learning, cooperative learning in
24 small groups, collaboration with mentors in the field

1 of study, and participation in STEM-related com-
2 petitions.

3 **SEC. 4. INNOVATIVE INSPIRATION SCHOOL GRANT PRO-**
4 **GRAM.**

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

7 (1) to provide opportunities for local edu-
8 cational agencies to support non-traditional STEM
9 education teaching methods;

10 (2) to support the participation of students in
11 nonprofit STEM competitions;

12 (3) to foster innovation and broaden interest in,
13 and access to, careers in the STEM fields by invest-
14 ing in programs supported by educators and profes-
15 sional mentors who receive hands-on training and
16 ongoing communications that strengthen the inter-
17 actions of the educators and mentors with—

18 (A) students who are involved in STEM
19 activities; and

20 (B) other students in the STEM class-
21 rooms and communities of such educators and
22 mentors; and

23 (4) to encourage collaboration among students,
24 engineers, and professional mentors.

25 (b) PROGRAM AUTHORIZED.—

1 (1) IN GENERAL.—The Secretary is authorized
2 to award grants, on a competitive basis, to local edu-
3 cational agencies to enable the local educational
4 agencies—

5 (A) to promote STEM in secondary
6 schools;

7 (B) to support the participation of sec-
8 ondary school students in non-traditional
9 STEM teaching methods; and

10 (C) to broaden secondary school students'
11 access to careers in STEM.

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

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

18 (c) APPLICATION.—

19 (1) IN GENERAL.—Each local educational agen-
20 cy desiring a grant under this Act shall submit an
21 application to the Secretary at such time, in such
22 manner, and containing such information as the Sec-
23 retary may reasonably require.

1 (2) CONTENTS.—The application shall, at a
2 minimum, include a description of how the local edu-
3 cational agency will—

4 (A) carry out STEM teaching programs
5 that will use a non-traditional STEM teaching
6 method;

7 (B) identify and recruit partners and men-
8 tors—

9 (i) to help carry out the programs de-
10 scribed in subparagraph (A); and

11 (ii) to assist students who participate
12 in such programs, including through tech-
13 nology-supported means;

14 (C) support educators who lead such pro-
15 grams, and participants in such programs,
16 through stipends or other incentives;

17 (D) recruit young women and individuals
18 from populations historically underrepresented
19 in the STEM fields to participate in such pro-
20 grams;

21 (E) identify public and private partners
22 that can support such programs with cash or
23 in-kind contributions;

24 (F) plan for sustaining such programs fi-
25 nancially beyond the grant period; and

1 (G) evaluate the grant project and the re-
2 sults of the grant project among participating
3 students, including—

4 (i) comparing students who partici-
5 pate in the grant project to similar stu-
6 dents who do not participate; and

7 (ii) evaluating—

8 (I) secondary school graduation
9 rates;

10 (II) rates of attendance at insti-
11 tutions of higher education;

12 (III) the number of students tak-
13 ing advanced STEM related secondary
14 school classes; and

15 (IV) the ability of students par-
16 ticipating in the grant project to part-
17 ner with professional mentors.

18 (3) PREFERENCE.—In awarding grants under
19 this section, the Secretary shall give priority to ap-
20 plications from local educational agencies that pro-
21 pose to carry out activities that target—

22 (A) a rural or urban school;

23 (B) a low-performing school or local edu-
24 cational agency; or

1 (C) a local educational agency or school
2 that serves low-income students.

3 (d) USES OF FUNDS.—

4 (1) IN GENERAL.—Each local educational agen-
5 cy that receives a grant under this Act shall use the
6 grant funds for any of the following:

7 (A) STEM EDUCATION AND CAREER AC-
8 TIVITIES.—Promotion of STEM education and
9 career activities.

10 (B) PURCHASE OF PARTS.—The purchase
11 of parts and supplies needed to support partici-
12 pation in non-traditional STEM teaching meth-
13 ods.

14 (C) TEACHER INCENTIVES AND STI-
15 PENDS.—Incentives and stipends for teachers
16 involved in non-traditional STEM teaching
17 methods outside of their regular teaching du-
18 ties.

19 (D) SUPPORT AND EXPENSES.—Support
20 and expenses for student participation in re-
21 gional and national nonprofit STEM competi-
22 tions.

23 (E) ADDITIONAL MATERIALS AND SUP-
24 PORT.—Additional materials and support, such
25 as equipment, facility use, technology,

1 broadband access, and other expenses, directly
2 associated with non-traditional STEM teaching
3 and mentoring.

4 (F) EVALUATION.—Carrying out the eval-
5 uation described in subsection (c)(2)(G).

6 (G) OTHER ACTIVITIES.—Carrying out
7 other activities that are related to the goals of
8 the grant program, as described in subsection
9 (a).

10 (2) PROHIBITION.—A local educational agency
11 shall not use grant funds awarded under this Act to
12 participate in any STEM competition that is not a
13 nonprofit competition.

14 (3) ADMINISTRATIVE COSTS.—Each eligible en-
15 tity that receives a grant under this Act may use not
16 more than 2 percent of the grant funds for costs re-
17 lated to the administration of the grant project.

18 (e) MATCHING REQUIREMENT.—

19 (1) IN GENERAL.—Subject to paragraph (2),
20 each local educational agency that receives a grant
21 under this Act shall secure, toward the cost of the
22 activities assisted under the grant, from non-Federal
23 sources, an amount equal to 50 percent of the grant.
24 The non-Federal contribution may be provided in
25 cash or in kind.

1 (2) WAIVER.—The Secretary may waive all or
2 part of the matching requirement described in para-
3 graph (1) for a local educational agency if the Sec-
4 retary determines that applying the matching re-
5 quirement would result in a serious financial hard-
6 ship or a financial inability to carry out the goals of
7 the grant project.

8 (f) SUPPLEMENT, NOT SUPPLANT.—Grant funds
9 provided to a local educational agency under this Act shall
10 be used to supplement, and not supplant, funds that would
11 otherwise be used for activities authorized under this Act.

12 (g) EVALUATION.—The Secretary shall establish an
13 evaluation program to determine the efficacy of the grant
14 program established by this Act, which shall include com-
15 paring students participating in a grant project funded
16 under this Act to similar students who do not so partici-
17 pate, in order to assess the impact of student participation
18 on—

19 (1) what courses a student takes in the future;

20 and

21 (2) a student’s postsecondary study.

22 (h) AUTHORIZATION OF APPROPRIATIONS.—

23 (1) IN GENERAL.—There are authorized to be
24 appropriated to carry out this Act such sums as may

1 be necessary for each of the fiscal years 2012
2 through 2016.

3 (2) LIMITATIONS.—Of the amounts appro-
4 priated under paragraph (1) for a fiscal year, not
5 more than 2 percent shall be used for the evaluation
6 described under subsection (g).

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