

111TH CONGRESS
2D SESSION

S. 3732

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

IN THE SENATE OF THE UNITED STATES

AUGUST 5, 2010

Mrs. SHAHEEN (for herself, Mr. REID, Mr. DORGAN, Mr. KAUFMAN, Mr. BEGICH, Mr. BINGAMAN, and Mr. KERRY) introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

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 physics),
9 in addition to courses in English, social studies,
10 and humanities.

11 (4) According to the Bureau of Labor Statistics,
12 overall engineering employment is expected to
13 grow by 11 percent over the 2008 through 2018 decade,
14 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, engineers
18 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 partici-
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 under sub-
6 section (h) for a fiscal year, the Secretary shall es-
7 tablish a communications and outreach program to
8 publicize—

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) EVALUATION PROGRAM.—The Secretary
15 shall establish an evaluation program to determine
16 the efficacy of the grant program established by this
17 Act, which shall include assessing the impact, of stu-
18 dent participation in the grant project assisted
19 under this Act, on future course-taking and postsec-
20 ondary study, by comparing students so partici-
21 pating to similar students who do not so participate.

22 (h) AUTHORIZATION OF APPROPRIATIONS.—

23 (1) IN GENERAL.—There are authorized to be
24 appropriated to the Secretary to carry out this Act

1 such sums as may be necessary for each of the fiscal
2 years 2011 through 2015.

3 (2) LIMITATIONS.—Of the amounts appro-
4 priated under paragraph (1) for a fiscal year—

5 (A) not more than 1 percent shall be used
6 for the communications and outreach program
7 under subsection (g)(1); and

8 (B) not more than 1 percent shall be used
9 for the evaluation program under subsection
10 (g)(2).

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