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STATE OF NEW JERSEY

217th LEGISLATURE

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Assemblyman Caputo

SYNOPSIS

Establishes the four-year "New Jersey Innovation Inspiration School Grant Pilot Program" in DOE to fund non-traditional Science, Technology, Engineering and Mathematics (STEM) programs.

CURRENT VERSION OF TEXT

As reported by the Assembly Education Committee on September 19, 2016, with amendments.

(Sponsorship Updated As Of: 10/7/2016)

AN ACT establishing the "New Jersey Innovation Inspiration School Grant Pilot Program" in the Department of Education.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. This act shall be known and may be cited as the "New Jersey Innovation Inspiration School Grant Pilot Program Act."

2. The Legislature finds and declares that:

a. A 2011 report on STEM (science, technology, engineering, and mathematics) jobs by the Georgetown University Center on Education and the Workforce indicates that New Jersey will demand a total of 248,250 STEM jobs by 2018, up from 223,190 in 2008, and about 93% of the predicted jobs will require postsecondary education and training;

b. According to the National Science Board's 2010 Science and Engineering Indicators, only 5% of American college graduates major in engineering, whereas in Asia about 20% of all baccalaureate degrees are in engineering and in China about 33% of all baccalaureate degrees are in engineering;

c. Although 4th graders in the United States score well against international competition, students in the United States fall near the bottom or dead last by 12th grade in mathematics and science, respectively;

d. Admissions requirements for undergraduate engineering schools include a solid background in mathematics (algebra, geometry, trigonometry, and calculus) and science (biology, chemistry, and physics), in addition to courses in English, social studies, and the humanities;

e. According to the Bureau of Labor Statistics, overall engineering employment is expected to grow by 11% from 2008 through 2018, and as a group, engineers earn some of the highest average starting salaries among individuals holding baccalaureate degrees;

f. Exposure to project- and problem-based learning in a competitive team environment gives students in grades 4 through 12 the skills they need to be successful in engineering programs of study and engineering careers; and

g. According to Brandeis University's Center for Youth and Communities, participants in FIRST Robotics, a non-profit organization that inspires young people to be science and technology leaders by engaging the young people in mentor-based programs, are more likely than nonparticipants to attend an institution of higher education on a full-time basis (88% versus

EXPLANATION – Matter enclosed in bold-faced brackets [thus] in the above bill is not enacted and is intended to be omitted in the law.

Matter underlined thus is new matter.
Matter enclosed in superscript numerals has been adopted as follows:
[1]Assembly AED committee amendments adopted September 19, 2016.

53%), nearly twice as likely to major in a science or engineering field, and more than three times as likely to have majored specifically in engineering.

3. As used in this act:

"Low-income student" means a student who qualifies for free or reduced price lunch under the federal school lunch program.

"Non-traditional STEM teaching method" means a STEM education method or strategy such as incorporating self-directed student learning, inquiry-based learning, cooperative learning in small groups, collaboration with mentors in the field of study, and participation in STEM-related competitions.

"STEM" means science, technology, engineering (including robotics), or mathematics.

4. The Commissioner of Education shall develop and administer the four-year New Jersey Innovation Inspiration School Grant Pilot Program. The purpose of the pilot program shall be to award grants to school districts to:

a. support non-traditional STEM teaching methods for students in grades 4 through 12;

b. support the participation of students in nonprofit STEM competitions;

c. foster innovation and broaden interest in, and access to, careers in the STEM fields by investing in programs supported by teachers and professional mentors; and

d. encourage collaboration among students, engineers, and other professional mentors.

The grants shall be allocated to school districts on a competitive basis.

5. a. A school district that wants to apply for a grant under the pilot program shall submit an application to the commissioner. The application shall, at the minimum, include a description of how the school district will:

(1) implement STEM teaching programs that use a non-traditional STEM teaching method;

(2) identify and recruit partners and mentors to help implement the programs, and to assist students who participate in STEM programs, including through the use of technology;

(3) support teachers who lead the STEM programs, and participants in the programs, through stipends or other incentives;

(4) recruit young women and students from other populations historically underrepresented in the STEM fields to participate in the programs;

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

(6) develop a plan for sustaining the programs financially beyond the grant period; and

(7) develop a method to evaluate the impact of the STEM teaching programs on participating students that includes:

(a) comparing students who participate in the program to similar students who do not participate; and

(b) evaluating the program's impact on the number of students taking advanced STEM-related high school classes, the ability of participating students to partner with professional mentors, the district's high school graduation rate, and the rate of enrollment of district students in institutions of higher education upon graduation.

b. The commissioner shall award a one-time, up-front grant not to exceed $150,000 to each of six qualifying school districts to be used to implement the pilot program. The grant funds may be used by the school district for a period of up to four years. The commissioner shall award the grants as follows: two grants shall be awarded to school districts located in Warren, Sussex, Passaic, Bergen, Morris, Essex, or Hudson Counties; two grants shall be awarded to school districts located in Hunterdon, Somerset, Union, Middlesex, Mercer, or Monmouth Counties; and two grants shall be awarded to school districts located in Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, or Salem Counties.

In awarding grants under the pilot program, the commissioner shall give priority to applications from school districts that propose to carry out activities that target:

(1) a rural or urban school;

(2) a low-performing school; or

(3) a school or school district that serves low-income students.

c. A school district that receives a grant may use the grant funds for any of the following:

(1) the promotion of STEM education and career activities;

(2) the purchase of supplies needed to support participation in non-traditional STEM teaching programs, such as robotics;

(3) to provide incentives and stipends for teachers involved in non-traditional STEM teaching methods outside of their regular teaching duties;

(4) to provide support and finance the expenses of student participation in regional and national nonprofit STEM competitions;

(5) to finance items such as equipment, facility use, technology, broadband access, and other expenses, directly associated with non-traditional STEM teaching and mentoring; and

(6) to carry out other activities that are related to the goals of the pilot program.

d. A school district that receives a grant under the pilot program shall provide district matching funds in an amount equal to 25% of the grant amount. The district shall also secure matching funds or in-kind contributions from corporate donors or other private sector donors in an amount equal to 25% of the grant

amount. The matching funds shall be used by the district to support the STEM-related activities outlined in the application submitted to the commissioner for grant funds.

e. Grant funds provided to a school district shall be used to supplement, and not supplant, funds used for STEM activities in the district at the time of the application for the grant.

6. a. There is established within the Department of Education a fund to be known as the "Innovation Inspiration School Grant Fund," hereinafter referred to as the "fund." The fund shall be used to provide grants to school districts under the pilot program.

b. The fund shall be annually credited with money appropriated by the Legislature, any moneys received by the State from corporate donors or other private sector support, and any federal funds which may become available for STEM-related activities.

c. The department shall seek to secure the use of such funds or other resources from the federal government or private nonprofit or for-profit sources to effectuate the purposes of this act as may be available therefor.

7. No State funds shall be used to support a grant under the pilot program unless there is an appropriation for the pilot program in the annual appropriations act for that fiscal year.

8. This act shall first take effect in the [1]**[**2016-2017**]** first full[1] school year [1]following enactment[1], but the Commissioner of Education may take such anticipatory administrative action in advance thereof as shall be necessary for the implementation of this act.