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117TH CONGRESS
1ST SESSION

H. R. 3859

To encourage and promote further research into informal learning opportunities to engage youth in STEM fields, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 14, 2021

Mrs. KIM of California (for herself, Ms. MOORE of Wisconsin, Mr. LUCAS, and Ms. JOHNSON of Texas) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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A BILL

To encourage and promote further research into informal learning opportunities to engage youth in STEM fields, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Innovations in Informal STEM Learning Act''.

SEC. 2. DEFINITIONS.

Section 2 of the STEM Education Act of 2015 is amended as follows:

(1) In the header, by striking ''**DEFINITION OF STEM EDUCATION**'' and inserting ''**DEFINITIONS**''.

(2) By striking ''For purposes of'' and inserting ''(a) IN GENERAL.—For purposes of''.

(3) By inserting at the end the following:

''(b) OTHER DEFINITIONS.—For the purposes of this Act, the following:

''(1) INSTITUTION OF HIGHER EDUCATION.—The term 'institution of higher education' has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

''(2) NON-PROFIT ORGANIZATION.—The term 'non-profit organization' means an organization which is described in section 501(c)(3) of the Internal Revenue Code of 1986 and exempt from tax under section 501(a) of such code.

''(3) PREK–8.—The term 'preK–8' means pre-kindergarten through grade 8.''.

SEC. 3. SUPPORTING PREK–8 INFORMAL STEM EDUCATION OPPORTUNITIES.

Section 3 of the STEM Education Act of 2015 (42 U.S.C. 1862q) is amended by adding at the end the following:

''(c) PREK–8 INFORMAL STEM EDUCATION PROGRAM.—

''(1) IN GENERAL.—The Director of the National Science Foundation shall provide grants to institutions of higher education or a non-profit organizations (or a consortia of such intuitions or organization) on a merit-reviewed, competitive basis for research on programming that engages students in grades preK–8, including underrepresented and rural students, in STEM education in order to prepare such students to pursue degrees or careers in STEM subjects.

''(2) USE OF FUNDS.—

''(A) IN GENERAL.—Grants awarded under this section shall be used toward research to advance the engagement of students, including underrepresented and rural students, in grades preK–8 in STEM through providing before-school, after-school, out-of-school, or summer activities, including in single-gender environments or programming, that are designed to encourage interest, engagement, and skills development for students in STEM.

''(B) PERMITTED ACTIVITIES.—The activities described in subparagraph (A) may include—

''(i) the provision of programming described in such subparagraph for the purpose of research described in such subparagraph;

''(ii) the use of a variety of engagement methods, including cooperative and hands-on learning;

''(iii) exposure of students to role models in the fields of STEM and near-peer mentors;

''(iv) training of informal learning educators, youth-serving professionals, and volunteers who lead informal STEM programs in using evidence-based methods consistent with the target student population being served;

''(v) education of students on the relevance and significance of STEM careers, provision of academic advice and assistance, and activities designed to help students make real-world connections to STEM content;

"(vi) the attendance of students at events, competitions, and academic programs to provide content expertise and encourage career exposure in STEM;

"(vii) activities designed to engage parents and families of students in grades preK–8 in STEM, which may include the purchase of parts and supplies needed to participate in such competitions;

"(viii) innovative strategies to engage students, such as using leadership skills and outcome measures to impart youth with the confidence to pursue STEM coursework and academic study;

"(ix) coordination with STEM-rich environments, including other nonprofit, nongovernmental organizations, out-of-classroom settings, single-gender environments, institutions of higher education, vocational facilities, corporations, museums, or science centers; and

"(x) the acquisition of instructional materials or technology-based tools to conduct applicable grant activity.

''(3) APPLICATION.—An applicant seeking funding under this section shall submit an application at such time, in such manner, and containing such information as may be required. Applications that include or partner with a nonprofit, nongovernmental organization that has extensive experience and expertise in increasing the participation of students in preK–8 in STEM are encouraged. The application may include the following:

''(A) A description of the target audience to be served by the research activity or activities for which such funding is sought.

''(B) A description of the process for recruitment and selection of students to participate in such activities.

''(C) A description of how such activity or activities may inform programming that engages students in grades preK–8 in STEM.

''(D) A description of how such activity or activities may inform programming that promotes student academic achievement in STEM.

''(E) An evaluation plan that includes, at a minimum, the use of outcome-oriented measures to determine the impact and efficacy of programming being researched.

''(4) EVALUATIONS.—Each recipient of a grant under this section shall provide, at the conclusion of every year during which the grant funds are received, an evaluation in a form prescribed by the Director.

''(5) ACCOUNTABILITY AND DISSEMINATION.—

''(A) EVALUATION REQUIRED.—The Director shall evaluate the activities established under this section. Such evaluation shall—

''(i) use a common set of benchmarks and tools to assess the results of research conducted under such grants; and

''(ii) to the extent practicable, integrate the findings of the research resulting from the activity or activities funded through the grant with the current research on serving students with respect to the pursuit of degrees or careers in STEM, including underrepresented and rural students, in grades preK–8.

''(B) REPORT ON EVALUATIONS.—Not later than 180 days after the completion of the evaluation under subparagraph (A), the Director shall submit to Congress and make widely available to the public a report that includes—

''(i) the results of the evaluation; and

''(ii) any recommendations for administrative and legislative action that could optimize the effectiveness of the program under this section.

''(6) COORDINATION.—In carrying out this section, the Director shall, for purposes of enhancing program effectiveness and avoiding duplication of activities, consult, cooperate, and coordinate with the programs and policies of other relevant Federal agencies.''.

SEC. 4. SENSE OF CONGRESS REGARDING INDUSTRY INVESTMENT IN STEM EDUCATION.

It is the sense of Congress that—

(1) In order to bolster the STEM workforce pipeline, many industry sectors are becoming involved in preK–8 initiatives to educate students on the relevance and significance of STEM careers and expose students to role models in the fields of STEM and near-peer mentors to foster their interest in STEM;

(2) Partnerships with education providers, STEM focused competitions, and academic programs, have become important aspects of private sector efforts to strengthen the STEM workforce;

(3) Understanding the work that private sector organizations are undertaking in STEM fields should inform the Federal Government's role in STEM education; and

(4) Successful private sector STEM initiatives, as reflected by measurements of relevant outcomes, should be encouraged and support by the National Science Foundation.

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