

117TH CONGRESS  
2D SESSION

**S.** \_\_\_\_\_

To establish within the National Science Foundation a program to award  
STEM ecosystem grants.

IN THE SENATE OF THE UNITED STATES

Mr. KELLY (for himself and Mr. MORAN) introduced the following bill; which  
was read twice and referred to the Committee on \_\_\_\_\_

## **A BILL**

To establish within the National Science Foundation a  
program to award STEM ecosystem grants.

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 “Strengthening STEM  
5 Ecosystems Act”.

### 6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

8 (1) STEM ecosystems—

9 (A) engage stakeholders within and outside

10 of a formal educational setting; and

1 (B) may include—

2 (i) community leaders;

3 (ii) school districts;

4 (iii) State, local, and Tribal govern-  
5 ments;

6 (iv) the Federal Government and Fed-  
7 eral facilities;

8 (v) businesses, industry, and work-  
9 force and economic development organiza-  
10 tions;

11 (vi) libraries;

12 (vii) museums and science centers;

13 (viii) institutions of higher education  
14 (including community colleges) and tech-  
15 nical schools;

16 (ix) community groups and clubs (in-  
17 cluding community-led research organiza-  
18 tions), foundations, and nonprofit organi-  
19 zations; and

20 (x) faith-based organizations.

21 (2) As defined in the CoSTEM Annual  
22 Progress Report of 2020, STEM ecosystems are  
23 united by a collective vision of supporting participa-  
24 tion in STEM through the creation of accessible, in-  
25 clusive STEM learning experiences and opportuni-

1       ties spanning all education stages and career path-  
2       ways. A STEM ecosystem continuously evaluates its  
3       activities and adapts as needed, plans for the long-  
4       term, and communicates its work to build broad sup-  
5       port and advance evidence-based practices. STEM  
6       ecosystems focus on long-term, shared, sustainable,  
7       and flexible STEM missions that bridge, integrate,  
8       and strengthen the learning opportunities offered by  
9       organizations across sectors to build partnerships  
10      that maximize investments to create stronger STEM  
11      outcomes.

12           (3) Federal agencies should encourage the col-  
13      laboration of stakeholders in STEM ecosystems that  
14      unite a broad range of non-Federal partners, includ-  
15      ing pre-K through grade 12 schools, informal edu-  
16      cators, informal STEM organizations, community-  
17      led and community-based research organizations, in-  
18      stitutions of higher education (including community  
19      colleges, historically Black colleges and universities,  
20      Tribal colleges and universities, Hispanic-serving in-  
21      stitutions, and other minority-serving institutions),  
22      employers, nonprofit organizations, social services,  
23      faith-based entities, economic and workforce develop-  
24      ment organizations, and museums, libraries,

1       credentialing services, and other lifelong learning  
2       and participatory science organizations.

3           (4) The National Science Foundation is a Fed-  
4       eral agency that can and does encourage the collabo-  
5       ration described in paragraph (3). When reviewing  
6       proposals before the agency, reviewers are asked to  
7       consider how the proposed activities will have a  
8       broad impact on society and advance greater societal  
9       outcomes.

10          (5) STEM ecosystems can increase work-based  
11       learning, training, and mentoring through educator-  
12       employer partnerships, allowing communities to  
13       more effectively leverage resources and expertise  
14       from strategic partners to provide seamless support  
15       to prepare the workforce of the future.

16          (6) STEM ecosystems that directly support and  
17       engage the American public can increase public  
18       awareness and support overall STEM literacy.

19   **SEC. 3. DEFINITIONS.**

20       In this Act:

21          (1) COMMITTEE.—The term “Committee”  
22       means the Committee on STEM Education estab-  
23       lished under section 101 of the America COM-  
24       PETES Reauthorization Act of 2010 (42 U.S.C.  
25       6621).

1           (2) DIRECTOR.—The term “Director” means  
2           the Director of the National Science Foundation.

3           (3) ELIGIBLE ENTITY.—The term “eligible enti-  
4           ty” means—

5                     (A) a STEM ecosystem; or

6                     (B) an eligible partnership.

7           (4) ELIGIBLE PARTNERSHIP.—The term “eligi-  
8           ble partnership” means a partnership between a  
9           STEM ecosystem described in subparagraph (A) of  
10          paragraph (8) and 1 or more non-Federal partners  
11          described in that subparagraph.

12          (5) HISPANIC-SERVING INSTITUTION.—The  
13          term “Hispanic-serving institution” has the meaning  
14          given such term in section 502 of the Higher Edu-  
15          cation Act of 1965 (20 U.S.C. 1101a).

16          (6) HISTORICALLY BLACK COLLEGE OR UNI-  
17          VERSITY.—The term “historically Black college or  
18          university” has the meaning given the term “part B  
19          institution” under section 322 of the Higher Edu-  
20          cation Act of 1965 (20 U.S.C. 1061).

21          (7) STEM.—The term “STEM” means science,  
22          technology (including computer science), engineer-  
23          ing, and mathematics.

24          (8) STEM ECOSYSTEM.—The term “STEM eco-  
25          system” means—

1 (A) a network, consortium, or multi-sector  
2 partnership, which may be led or co-led by a  
3 nonprofit organizational entity, that is oper-  
4 ating in the United States and united by a col-  
5 lective vision of supporting participation in  
6 STEM through the creation of accessible, inclu-  
7 sive STEM learning experiences and opportuni-  
8 ties (as defined in the CoSTEM Annual  
9 Progress Report of 2020) with a broad range of  
10 non-Federal partners, including pre-K through  
11 grade 12 schools, informal educators, institu-  
12 tions of higher education (including community  
13 colleges, historically Black colleges and univer-  
14 sities, Hispanic-serving institutions, Tribal Col-  
15 leges and Universities, and other minority-serv-  
16 ing institutions), employers, other nonprofit or-  
17 ganizations, economic and workforce develop-  
18 ment organizations, industry or trade organiza-  
19 tions, trade or technician training schools, so-  
20 cial services providers, faith-based organiza-  
21 tions, museums, libraries, credentialing organi-  
22 zations, and other lifelong learning organiza-  
23 tions; or

24 (B) an office, task force, or other section  
25 of the office of the Governor of a State, a State

1 educational agency, or a Tribal government that  
2 has the mission of improving STEM education  
3 and outcomes within the State.

4 (9) STEM LEARNING STAKEHOLDER.—The term  
5 “STEM learning stakeholder” means an organiza-  
6 tion that is—

7 (A) dedicated to the goal of improving  
8 STEM belonging, participation, and learning;

9 (B) providing accessible and inclusive  
10 STEM experiences and opportunities; or

11 (C) supporting seamless educational and  
12 STEM workforce transitions.

13 (10) TRIBAL COLLEGE OR UNIVERSITY.—The  
14 term “Tribal College or University” has the meaning  
15 given the term in section 316 of the Higher Edu-  
16 cation Act of 1965 (20 U.S.C. 1059c).

17 **SEC. 4. STEM ECOSYSTEM GRANTS.**

18 (a) PURPOSE.—The purpose of a grant awarded  
19 under this section is to leverage the expertise, depth of  
20 cross-sector partnerships, and equity focus of STEM eco-  
21 systems to enhance the value of STEM-intensive organiza-  
22 tions in improving STEM learning to address immediate  
23 and long-term STEM workforce and economic needs in  
24 States and communities.

25 (b) GRANTS.—

1           (1) IN GENERAL.—The Director, subject to the  
2           availability of appropriations, may award grants on  
3           a competitive basis to eligible entities to carry out  
4           the activities described in paragraph (4). The Direc-  
5           tor shall notify the Committee of all grant awards,  
6           including the grant recipients, made under this sec-  
7           tion.

8           (2) TERM.—A grant awarded under paragraph  
9           (1)—

10                   (A) shall be for a period of 3 to 5 years;  
11                   and

12                   (B) may be renewed for additional 3-year  
13                   periods.

14           (3) APPLICATIONS.—

15                   (A) IN GENERAL.—An eligible entity seek-  
16                   ing funding under paragraph (1) shall submit  
17                   to the Director an application at such time, in  
18                   such manner, and containing such information  
19                   as the Director may require.

20                   (B) REQUIREMENTS.—An application sub-  
21                   mitted under subparagraph (A) shall include, at  
22                   a minimum—

23                           (i) a description of the eligible entity,  
24                           including, in the case of an eligible part-  
25                           nership, a description of the role that each



1 member of the eligible partnership will play  
2 in implementing the proposal for the use of  
3 the grant funds;

4 (ii) a description of each of the activi-  
5 ties to be carried out by the eligible entity  
6 using the grant funds; and

7 (iii) an evaluation plan that includes  
8 outcome-oriented measures to determine  
9 the impact and efficacy of the grant  
10 award.

11 (4) USE OF FUNDS.—Grants awarded under  
12 paragraph (1) shall be used for activities that draw  
13 on the expertise of eligible entities to improve STEM  
14 learning, the STEM network or community of prac-  
15 tice, and workforce development, including—

16 (A) convening STEM learning stakeholders  
17 to review and assess statewide or regional  
18 STEM education needs and practices, share  
19 best practices, and bolster existing programs or  
20 develop new programs and other means to ad-  
21 dress such needs;

22 (B) designing or developing sustainable  
23 systems to support STEM learning connections,  
24 networks, and infrastructure;

1 (C) developing eligible partnerships to ex-  
2 pand access to the opportunities described in  
3 subparagraphs (A) and (B) to rural and under-  
4 represented populations, including by  
5 supplementing the support needed to partici-  
6 pate in those opportunities;

7 (D) developing regional hubs or working  
8 groups within a STEM ecosystem to connect el-  
9 igible partnerships described in subparagraph  
10 (C) with State and local workforce trajectories;

11 (E) convening STEM learning stakeholder  
12 to support State-level workforce planning to en-  
13 sure alignment between STEM learning activi-  
14 ties and workforce needs;

15 (F) obtaining technical assistance provided  
16 by an outside organization; and

17 (G) supporting STEM learning programs,  
18 events, or pre-enrollment activities, including  
19 measurable outreach campaigns to raise STEM  
20 awareness in rural or underserved areas.

21 (5) GEOGRAPHIC DIVERSITY.—Not fewer than  
22 25 percent of grants awarded under this section and  
23 25 percent of the total amount awarded under para-  
24 graph (1) shall be made to eligible entities serving  
25 jurisdictions that participate in the program under

1 section 113 of the National Science Foundation Au-  
2 thorization Act of 1988 (42 U.S.C. 1862g).

3 (6) EVALUATIONS.—Each recipient of a grant  
4 under this section shall provide, at the conclusion of  
5 every year during which the grant funds are re-  
6 ceived, an evaluation according to the evaluation  
7 plan submitted under paragraph (3)(B)(iii).

8 (c) COORDINATION.—In carrying out this section, the  
9 Director shall, for the purpose of enhancing program ef-  
10 fectiveness and avoiding duplications of activities, consult,  
11 cooperate, and coordinate with the programs and policies  
12 of other relevant Federal agencies.

13 (d) AUTHORIZATION OF APPROPRIATIONS.—To carry  
14 out this section, there is authorized to be appropriated  
15 \$25,000,000 for each of fiscal years 2022 through 2026.