

design, principles, and practices to biological systems to advance fundamental understanding of complex natural systems and to enable novel functions and capabilities.

Engineering biology research is used in microbes and plants to grow food more resilient to climate change, reduce our dependency on fossil fuels, and make more effective drugs to treat human diseases. Some researchers are even engineering microbes for environmental cleanup. These are some of our Nation's and world's greatest challenges, and engineering biology is one of our greatest tools.

The economy of the 21st century will be driven by the bioeconomy. Other countries are making significant investments in engineering biology research and development. We must recognize that U.S. leadership is not just about growing our economy and ensuring that our Nation benefits from the products of engineering biology; it is also about leading responsibly.

As China accelerates its own investments and the tools of engineering biology are increasingly cheap and accessible to individuals everywhere, we must also be mindful of the security implications. The potential for misuse of this technology to cause harm makes more urgent our need to invest strategically in engineering biology research today.

Along with authorizing a Federal engineering biology research initiative, this bill would also establish a framework for greater coordination of Federal investments in engineering biology; require a national strategy for those investments; expand public-private partnerships; focus on the education and training for the next generation of engineering biology researchers; and address any potential ethical, security, and societal issues associated with engineering biology research.

It is past time for the United States to recognize the significance of this emerging research area to our economic and national security.

I was disappointed by the lack of such recognition in this administration's last budget request but hopeful to see the tide turning with the convening of a recent White House summit on the bioeconomy.

I look forward to working with my colleagues on both sides of the aisle and with the administration to ensure that the United States will not lose its leadership position in this area.

H.R. 4373 is an important bill, and I urge my colleagues to support it.

Mr. Speaker, I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume.

I rise in support of H.R. 4373, the Engineering Biology Research and Development Act of 2019.

I was proud to join Chairwoman JOHNSON, as well as Representatives JIM SENSENBRENNER and ZOE LOFGREN, in introducing this bill.

The U.S. was a key driver in biological innovation in the 20th century, but there is increasing global competition. Other countries recognize the benefits of biotech technology and are striving to capture its potential through new investments and friendly regulations.

H.R. 4373 promotes a national research strategy around engineering biology to ensure that the U.S. remains the global leader in biology and biotechnology.

New gene editing techniques like CRISPR and the advancement of rapid gene sequencing are driving innovation in agriculture, medicine, energy, and manufacturing. We must keep pace and set a research and regulatory framework that supports innovation and creates a marketplace for new ideas and projects, while setting the safety and ethical standards for the world to follow.

H.R. 4373 establishes a national engineering biology research and development initiative to provide interagency research coordination and develop a 3-year strategic plan.

The bill also authorizes research at the agencies under the Science Committee's jurisdiction, including the National Science Foundation, the National Institute of Standards and Technology, and the Department of Energy.

Last month, the White House convened a summit with the Nation's foremost bioeconomy leaders from industry, academia, and government to discuss how to maintain America's leadership in biology for our economic and national security. I hope that summit, along with this legislation, will build momentum for a serious national public-private effort to advance and protect the U.S. bioeconomy.

I urge my colleagues to support this good, bipartisan bill.

I would note to the chairwoman that I have no additional speakers, and I reserve the balance of my time.

Ms. JOHNSON of Texas. Mr. Speaker, I have no requests for time, and if the gentleman is ready to close, then I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume.

In both the Agriculture Committee and the Science Committee, we have discussed biotechnology research and regulation for years, but I can't remember a more exciting or challenging time for the field than today. H.R. 4373 will set a national agenda to advance innovation and help us meet those challenges.

I appreciate the chairwoman and her staff for working with us and the biology stakeholder community to produce a good, bipartisan bill. I ask my colleagues to support this bill.

Mr. Speaker, I yield back the balance of my time.

Ms. JOHNSON of Texas. Mr. Speaker, I yield myself the balance of my time.

I wish to express my appreciation for Mr. SENSENBRENNER, Mr. LUCAS, Ms. LOFGREN, and myself, and I have no further requests for time.

I would simply urge the passage of this bill, and I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentlewoman from Texas (Ms. JOHNSON) that the House suspend the rules and pass the bill, H.R. 4373, as amended.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the bill, as amended, was passed.

A motion to reconsider was laid on the table.

#### SUSTAINABLE CHEMISTRY RESEARCH AND DEVELOPMENT ACT OF 2019

Ms. JOHNSON of Texas. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 2051) to provide for Federal coordination of activities supporting sustainable chemistry, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 2051

*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 "Sustainable Chemistry Research and Development Act of 2019".

#### SEC. 2. FINDINGS.

Congress finds that—

(1) Congress recognized the importance and value of sustainable chemistry and the role of the Federal Government in section 114 of the American Innovation and Competitive-ness Act (Public Law 114-329);

(2) sustainable chemistry and materials transformation is a key value contributor to business competitiveness across many industrial and consumer sectors;

(3) companies across hundreds of supply chains critical to the American economy are seeking to reduce costs and open new markets through innovations in manufacturing and materials, and are in need of new innovations in chemistry, including sustainable chemistry;

(4) sustainable chemistry can improve the efficiency with which natural resources are used to meet human needs for chemical products while avoiding environmental harm, reduce or eliminate the emissions of and exposures to hazardous substances, minimize the use of resources, and benefit the economy, people, and the environment; and

(5) a recent report by the Government Accountability Office (GAO-18-307) found that the Federal Government could play an important role in helping realize the full innovation and market potential of sustainable chemistry technologies, including through a coordinated national effort on sustainable chemistry and standardized tools and definitions to support sustainable chemistry research, development, demonstration, and commercialization.

#### SEC. 3. NATIONAL COORDINATING ENTITY FOR SUSTAINABLE CHEMISTRY.

(a) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall convene an interagency entity (referred to in this Act as the "Entity") under the National Science and Technology Council with the responsibility to coordinate Federal programs and activities in support of sustainable chemistry, including those described in sections 5 and 6.

(b) **COORDINATION WITH EXISTING GROUPS.**—In convening the Entity, the Director of the Office of Science and Technology Policy shall consider overlap and possible coordination with existing committees, subcommittees, or other groups of the National Science and Technology Council, such as—

- (1) the Committee on Environment;
- (2) the Committee on Technology;
- (3) the Committee on Science; or
- (4) related groups or subcommittees.

(c) **CO-CHAIRS.**—The Entity shall be chaired by the Office of Science and Technology Policy and a representative from the Environmental Protection Agency, the National Institute of Standards and Technology, the National Science Foundation, or the Department of Energy, as selected by the Director of the Office of Science and Technology Policy.

(d) **AGENCY PARTICIPATION.**—The Entity shall include representatives, including subject matter experts, from the Environmental Protection Agency, the National Institute of Standards and Technology, the National Science Foundation, the Department of Energy, the Department of Agriculture, the Department of Defense, the National Institutes of Health, the Centers for Disease Control and Prevention, the Food and Drug Administration, the Office of Management and Budget, and other related Federal agencies, as appropriate.

(e) **TERMINATION.**—The Entity shall terminate on the date that is 10 years after the date of enactment of this Act.

#### SEC. 4. ROADMAP FOR SUSTAINABLE CHEMISTRY.

(a) **ROADMAP.**—Not later than 2 years after the date of enactment of this Act, the Entity shall—

(1) consult with relevant stakeholders including representatives from industry, academia, the Federal Government, and international entities to develop and update as needed a consensus definition of “sustainable chemistry” to guide the activities under this Act;

(2) develop a working framework of attributes characterizing and metrics for assessing sustainable chemistry, as described in subsection (b);

(3) assess the state of sustainable chemistry in the United States as a key benchmark from which progress under the activities described in this Act can be measured, including assessing key sectors of the United States economy, key technology platforms, commercial priorities, and barriers to innovation;

(4) coordinate and support Federal research, development, demonstration, technology transfer, commercialization, education, and training efforts in sustainable chemistry, including budget coordination and support for public-private partnerships, as appropriate;

(5) identify methods by which the Federal agencies can facilitate the development of incentives for development, consideration and use of sustainable chemistry processes and products, including innovative financing mechanisms;

(6) identify major scientific challenges, roadblocks, or hurdles to transformational progress in improving the sustainability of the chemical sciences; and

(7) identify other opportunities for expanding Federal efforts in support of sustainable chemistry.

(b) **CHARACTERIZING AND ASSESSING SUSTAINABLE CHEMISTRY.**—The Entity shall develop a working framework of attributes characterizing and metrics for assessing sustainable chemistry for the purposes of carrying out the Act. In developing this framework, the Entity shall—

(1) seek advice and input from stakeholders as described in subsection (c);

(2) consider existing definitions of or frameworks characterizing and metrics for assessing sustainable chemistry already in use at Federal agencies;

(3) consider existing definitions of or frameworks characterizing and metrics for assessing sustainable chemistry already in use by international organizations of which the United States is a member, such as the Organisation for Economic Co-operation and Development; and

(4) consider any other appropriate existing definitions of or frameworks characterizing and metrics for assessing sustainable chemistry.

(c) **CONSULTATION.**—In carrying out the duties described in subsections (a) and (b), the Entity shall consult with stakeholders qualified to provide advice and information to guide Federal activities related to sustainable chemistry through workshops, requests for information, and other mechanisms as necessary. The stakeholders shall include representatives from—

(1) business and industry (including trade associations and small- and medium-sized enterprises from across the value chain);

(2) the scientific community (including the National Academies of Sciences, Engineering, and Medicine, scientific professional societies, and academia);

(3) the defense community;

(4) State, tribal, and local governments, including nonregulatory State or regional sustainable chemistry programs, as appropriate;

(5) nongovernmental organizations; and

(6) other appropriate organizations.

(d) **REPORT TO CONGRESS.**—

(1) **IN GENERAL.**—Not later than 3 years after the date of enactment of this Act, the Entity shall submit a report to the Committee on Environment and Public Works, the Committee on Commerce, Science, and Transportation, and the Committee on Appropriations of the Senate, and the Committee on Science, Space, and Technology, the Committee on Energy and Commerce, and the Committee on Appropriations of the House of Representatives. In addition to the elements described in subsections (a) and (b), the report shall include—

(A) a summary of federally funded, sustainable chemistry research, development, demonstration, technology transfer, commercialization, education, and training activities;

(B) a summary of the financial resources allocated to sustainable chemistry initiatives;

(C) an assessment of the current state of sustainable chemistry in the United States, including the role that Federal agencies are playing in supporting it;

(D) an analysis of the progress made toward achieving the goals and priorities of this Act, and recommendations for future program activities;

(E) an assessment of the benefits of expanding existing, federally supported, regional innovation and manufacturing hubs, centers, and institutes to include sustainable chemistry and the value of directing the creation of 1 or more dedicated sustainable chemistry centers of excellence, hubs, or institutes; and

(F) an evaluation of steps taken and future strategies to avoid duplication of efforts, streamline interagency coordination, facilitate information sharing, and spread best practices among participating agencies.

(2) **SUBMISSION TO GAO.**—The Entity shall also submit the report described in paragraph (1) to the Comptroller General of the United States for consideration in future Congressional inquiries.

#### SEC. 5. AGENCY ACTIVITIES IN SUPPORT OF SUSTAINABLE CHEMISTRY.

(a) **IN GENERAL.**—The agencies participating in the Entity shall carry out activities in support of sustainable chemistry, as appropriate to the specific mission and programs of each agency.

(b) **ACTIVITIES.**—The activities described in subsection (a) shall—

(1) incorporate sustainable chemistry into existing research, development, demonstration, technology transfer, commercialization, education, and training programs, that the agency determines to be relevant, including consideration of—

(A) merit-based competitive grants to individual investigators and teams of investigators, including, to the extent practicable, early career investigators for research and development;

(B) grants to fund collaborative research and development partnerships among universities, industry, and nonprofit organizations;

(C) coordination of sustainable chemistry research, development, demonstration, and technology transfer conducted at Federal laboratories and agencies;

(D) incentive prize competitions and challenges in coordination with such existing Federal agency programs; and

(E) grants, loans, and loan guarantees to aid in the technology transfer and commercialization of sustainable chemicals, materials, processes, and products;

(2) collect and disseminate information on sustainable chemistry research, development, technology transfer, and commercialization, including information on accomplishments and best practices;

(3) raise awareness of sustainable chemistry concepts through public outreach activities;

(4) expand the education and training of students at all levels of education, professional scientists and engineers, and other professionals involved in all aspects of sustainable chemistry and engineering appropriate to that level of education and training, including through—

(A) partnerships with industry as described in section 6;

(B) support for the integration of sustainable chemistry principles into elementary, secondary, undergraduate, and graduate chemistry and chemical engineering curriculum and research training, as appropriate to that level of education and training; and

(C) support for integration of sustainable chemistry principles into existing or new professional development opportunities for professionals including teachers, faculty, and individuals involved in laboratory research, (product development, materials specification and testing, life cycle analysis, and management);

(5) as relevant to an agency’s programs, examine methods by which the Federal agencies, in collaboration and consultation with the National Institute of Standards and Technology, may facilitate the development or recognition of validated, standardized tools for performing sustainability assessments of chemistry processes or products;

(6) through programs identified by an agency, support (including through technical assistance, participation, financial support, communications tools, awards, or other forms of support) outreach and dissemination of sustainable chemistry advances such as non-Federal symposia, forums, conferences, and publications in collaboration with, as appropriate, industry, academia, scientific and professional societies, and other relevant groups;

(7) provide for public input and outreach to be integrated into the activities described in

this section by the convening of public discussions, through mechanisms such as public meetings, consensus conferences, and educational events, as appropriate;

(8) within each agency, develop metrics to track the outputs and outcomes of the programs supported by that agency; and

(9) incentivize or recognize actions that advance sustainable chemistry products, processes, or initiatives, including through the establishment of a nationally recognized awards program through the Environmental Protection Agency to identify, publicize, and celebrate innovations in sustainable chemistry and chemical technologies.

(c) **LIMITATIONS.**—Financial support provided under this section shall—

(1) be available only for pre-competitive activities; and

(2) not be used to promote the sale of a specific product, process, or technology, or to disparage a specific product, process, or technology.

(d) **AGENCY BUDGET REPORT.**—For each of fiscal years 2021 through 2030, not later than 90 days after submission of the President's annual budget request, the Entity shall prepare and submit to the Committee on Environment and Public Works, the Committee on Commerce, Science, and Transportation, and the Committee on Appropriations of the Senate, and the Committee on Science, Space, and Technology, the Committee on Energy and Commerce, and the Committee on Appropriations of the House of Representatives a report that includes a summarized agency budget in support of the activities under this Act for the fiscal year to which such budget request applies, and for the then current fiscal year, including a breakout of spending for each agency participating in such activities.

#### **SEC. 6. PARTNERSHIPS IN SUSTAINABLE CHEMISTRY.**

(a) **IN GENERAL.**—The agencies participating in the Entity may facilitate and support, through financial, technical, or other assistance, the creation of partnerships between institutions of higher education, non-governmental organizations, consortia, or companies across the value chain in the chemical industry, including small- and medium-sized enterprises, to—

(1) create collaborative sustainable chemistry research, development, demonstration, technology transfer, and commercialization programs; and

(2) train students and retrain professional scientists, engineers, and others involved in materials specification on the use of sustainable chemistry concepts and strategies by methods, including—

(A) developing or recognizing curricular materials and courses for undergraduate and graduate levels and for the professional development of scientists, engineers, and others involved in materials specification; and

(B) publicizing the availability of professional development courses in sustainable chemistry and recruiting professionals to pursue such courses.

(b) **PRIVATE SECTOR PARTICIPATION.**—To be eligible for support under this section, a partnership in sustainable chemistry shall include at least one private sector organization.

(c) **SELECTION OF PARTNERSHIPS.**—In selecting partnerships for support under this section, the agencies participating in the Entity shall also consider the extent to which the applicants are willing and able to demonstrate evidence of support for, and commitment to, the goals outlined in the roadmap and report described in section 4.

(d) **PROHIBITED USE OF FUNDS.**—Financial support provided under this section may not be used—

(1) to support or expand a regulatory chemical management program at an implementing agency under a State law;

(2) to construct or renovate a building or structure; or

(3) to promote the sale of a specific product, process, or technology, or to disparage a specific product, process, or technology.

#### **SEC. 7. PRIORITIZATION.**

In carrying out this Act, the Entity shall focus its support for sustainable chemistry activities on those that achieve, to the highest extent practicable, the goals outlined in the Act.

#### **SEC. 8. RULE OF CONSTRUCTION.**

Nothing in this Act shall be construed to alter or amend any State law or action with regard to sustainable chemistry, as defined by the State.

The **SPEAKER** pro tempore. Pursuant to the rule, the gentlewoman from Texas (Ms. JOHNSON) and the gentleman from Oklahoma (Mr. LUCAS) each will control 20 minutes.

The Chair recognizes the gentlewoman from Texas.

#### **GENERAL LEAVE**

Ms. JOHNSON of Texas. Mr. Speaker, I ask unanimous consent that all Members have 5 legislative days to revise and extend their remarks and to include extraneous materials on H.R. 2051, the bill under consideration.

The **SPEAKER** pro tempore. Is there objection to the request of the gentlewoman from Texas?

There was no objection.

Ms. JOHNSON of Texas. Mr. Speaker, I yield myself such time as I may consume.

I rise in support of H.R. 2051, the Sustainable Chemistry Research and Development Act of 2019.

I want to thank Representatives LIPINSKI and MOOLENAAR for introducing this good, bipartisan bill.

Chemistry touches every aspect of modern society. As the chemical industry continues to innovate to make our lives easier, we must do more to minimize the risks to the environment and to public health. Sustainable chemistry practices and principles, once widely adopted, will provide the private sector with tools to meet societal needs while mitigating negative impacts on the health and safety of future generations.

Unfortunately, progress in adopting this approach has been slow. As we learned during the Science Committee hearing on this topic earlier this year, the key challenges include a lack of research, a lack of Federal coordination, a lack of consensus regarding how sustainability should be measured and assessed, and a need for improved sustainable chemistry education.

This legislation establishes the framework for Federal leadership to advance sustainable chemistry. Specifically, the bill provides for improved coordination of Federal activities, including research and development of more sustainable chemicals, processes, and systems.

The bill also supports improved education in sustainable chemistry and expands opportunities for the Federal

Government to partner with industry to bring innovations to market.

When the Federal science agencies support our Nation's scientists and engineers to come up with better solutions to real-world problems, our brightest minds will always rise to the challenge.

I urge my colleagues to support this important legislation, and I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume.

I rise in support of H.R. 2051, the Sustainable Chemistry Research and Development Act of 2019.

H.R. 2051 provides for Federal coordination of research and development for new innovations in chemistry, manufacturing, and materials. This bill continues the Science Committee's bipartisan commitment to prioritizing fundamental research that leads to new technologies that will drive the American economy into the future.

Chemistry is essential to our economy and plays a vital role in helping solve the biggest challenges facing the Nation and our world. From farming to medicine, chemical manufacturing touches our lives every day.

There is market demand for chemical products that use resources more efficiently and are safer for both humans and the environment. Consumers also want these products to be just as effective, or more effective, than the traditional chemical products. H.R. 2051 will help support the research, training, and standards needed to meet these demands.

It is rare that a bill has the fundamental endorsement of both chemical companies and environmental advocates.

I thank the bill's sponsors, Representative DAN LIPINSKI and Representative JOHN MOOLENAAR, for their leadership on this issue and for developing a good consensus bill. I encourage my colleagues to support it.

Mr. Speaker, I reserve the balance of my time.

Ms. JOHNSON of Texas. Mr. Speaker, I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield 2 minutes to the gentleman from Michigan (Mr. MOOLENAAR), who has been a pleasure to work with, both on scientific matters and on a variety of financial service interests, too.

Mr. MOOLENAAR. Mr. Speaker, I want to thank Congressman DAN LIPINSKI for his leadership on this legislation. As always, I have enjoyed working with him and serving with him as the founding co-chair of the bipartisan Congressional Chemistry Caucus here in the House.

Chemistry has improved the daily lives of every American, and I want to thank Chairwoman JOHNSON and Ranking Member LUCAS for their leadership working together to bring the Sustainable Chemistry Research and Development Act of 2019 to the floor this year. This legislation will further the incredible progress chemistry has already

made in the daily lives of people around the world, with new and exciting products and lifesaving cures and innovations.

Chemistry also employs hundreds of thousands of people in good-paying jobs and has made the country the world leader in an endless list of industries and fields. Today's legislation will help that progress continue by directing the Federal Government to improve its coordination of sustainable chemistry research.

The Sustainable Chemistry Research and Development Act of 2019 will bring together the Federal Government, the private sector, and the scientific community to support groundbreaking research in chemistry and keep our Nation at the forefront of innovation.

I thank my colleagues for their support.

□ 1530

Ms. JOHNSON of Texas. Mr. Speaker, I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, to ensure the continued leadership of the United States in science and technology, we must invest in research that will lead to the industries of the future. The Sustainable Chemistry Act of 2019 will keep our country at the forefront of chemistry innovation and help create new products that will benefit all Americans.

Mr. Speaker, I urge my colleagues to support H.R. 2051, and I yield back the balance of my time.

Ms. JOHNSON of Texas. Mr. Speaker, I simply wish to thank our authors and our staff, and I urge passage of this bill. I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentlewoman from Texas (Ms. JOHNSON) that the House suspend the rules and pass the bill, H.R. 2051, as amended.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the bill, as amended, was passed.

A motion to reconsider was laid on the table.

#### BUILDING BLOCKS OF STEM ACT

Ms. JOHNSON of Texas. Mr. Speaker, I move to suspend the rules and pass the bill (S. 737) to direct the National Science Foundation to support STEM education research focused on early childhood.

The Clerk read the title of the bill.

The text of the bill is as follows:

S. 737

*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 "Building Blocks of STEM Act".

#### SEC. 2. FINDINGS.

Congress finds the following:

(1) The National Science Foundation is a large investor in STEM education and plays

a key role in setting research and policy agendas.

(2) While studies have found that children who engage in scientific activities from an early age develop positive attitudes toward science and are more likely to pursue STEM expertise and careers later on, the majority of current research focuses on increasing STEM opportunities for middle school-aged children and older.

(3) Women remain widely underrepresented in the STEM workforce, and this disparity extends down through all levels of education.

#### SEC. 3. SUPPORTING EARLY CHILDHOOD AND ELEMENTARY STEM EDUCATION RESEARCH.

In awarding grants under the Discovery Research PreK–12 program, the Director of the National Science Foundation shall consider the age distribution of a STEM education research and development project to improve the focus of research and development on elementary and prekindergarten education.

#### SEC. 4. SUPPORTING FEMALE STUDENTS IN PREKINDERGARTEN THROUGH ELEMENTARY SCHOOL IN STEM EDUCATION.

Section 305(d) of the American Innovation and Competitiveness Act (42 U.S.C. 1862s–5(d)) is amended by adding at the end the following:

"(3) RESEARCH.—As a component of improving participation of women in STEM fields, research funded by a grant under this subsection may include research on—

"(A) the role of teacher training and professional development, including effective incentive structures to encourage teachers to participate in such training and professional development, in encouraging or discouraging female students in prekindergarten through elementary school from participating in STEM activities;

"(B) the role of teachers in shaping perceptions of STEM in female students in prekindergarten through elementary school and discouraging such students from participating in STEM activities;

"(C) the role of other facets of the learning environment on the willingness of female students in prekindergarten through elementary school to participate in STEM activities, including learning materials and textbooks, seating arrangements, use of media and technology, classroom culture, and composition of students during group work;

"(D) the role of parents and other caregivers in encouraging or discouraging female students in prekindergarten through elementary school from participating in STEM activities;

"(E) the types of STEM activities that encourage greater participation by female students in prekindergarten through elementary school;

"(F) the role of mentorship and best practices in finding and utilizing mentors; and

"(G) the role of informal and after-school STEM learning opportunities on the perception of and participation in STEM activities of female students in prekindergarten through elementary school."

#### SEC. 5. SUPPORTING FEMALE STUDENTS IN PREKINDERGARTEN THROUGH ELEMENTARY SCHOOL IN COMPUTER SCIENCE EDUCATION.

Section 310(b) of the American Innovation and Competitiveness Act (42 U.S.C. 1862s–7(b)) is amended by adding at the end the following:

"(3) USES OF FUNDS.—The tools and models described in paragraph (2)(C) may include—

"(A) offering training and professional development programs, including summer or academic year institutes or workshops, designed to strengthen the capabilities of prekindergarten and elementary school teachers and to familiarize such teachers with the

role of bias against female students in the classroom;

"(B) offering innovative pre-service and in-service programs that instruct teachers on female-inclusive practices for teaching computing concepts;

"(C) developing distance learning programs for teachers or students, including developing curricular materials, play-based computing activities, and other resources for the in-service professional development of teachers that are made available to teachers through the Internet;

"(D) developing or adapting prekindergarten and elementary school computer science curricular materials that incorporate contemporary research on the science of learning, particularly with respect to female inclusion;

"(E) developing and offering female-inclusive computer science enrichment programs for students, including after-school and summer programs;

"(F) providing mentors for female students in prekindergarten through elementary school to support such students in participating in computer science activities;

"(G) engaging female students in prekindergarten through elementary school, and their guardians (if such communication takes place on school premises during otherwise-scheduled conferences or formal conversations between teachers and guardians) about—

"(i) the difficulties faced by female students with regard to maintaining an interest in participating in computer science activities; and

"(ii) the potential positive career benefits of engaging in such activities;

"(H) acquainting female students in prekindergarten through elementary school with careers in computer science and encouraging such students to consider careers in the computer science field; and

"(I) developing tools to evaluate activities conducted under this subsection, including reports for evaluating the effectiveness of activities under this section."

The SPEAKER pro tempore. Pursuant to the rule, the gentlewoman from Texas (Ms. JOHNSON) and the gentleman from Oklahoma (Mr. LUCAS) each will control 20 minutes.

The Chair recognizes the gentlewoman from Texas.

GENERAL LEAVE

Ms. JOHNSON of Texas. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and to include extraneous material on S. 737, the bill under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentlewoman from Texas?

There was no objection.

Ms. JOHNSON of Texas. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, I rise today in support of S. 737, the Building Blocks of STEM Act.

The demand for computer science skills is on the rise across all sectors of the economy. To ensure that we have the capacity to meet that demand, we must attract more students to study computer science. A major challenge for increasing the number of computer science graduates is the low participation of women.