STEM Education Highlights of the FY 2017 Federal Budget
February 2016

Top-Level Highlights

- The FY 2017 federal budget proposes $1.215 trillion in outlays for discretionary programs: $601 billion for defense, $614 for non-defense. Overall Budget Table
- $3 billion in discretionary funding for STEM education programs in total across 13 federal agencies, about the same level as 2016. STEM Education Fact Sheet
- $2 billion in separate new mandatory spending for the *Computer Science for All* initiative ($ 4 billion proposed over 3 years). *Computer Science for All* Fact Sheet
- $73 billion in funding for basic and applied research (the "R" in R&D), a $4 billion or 6 percent increase from FY 2016 enacted levels. R+D Fact Sheet

[Note on the term "Mandatory Spending": The Administration's FY 2017 Budget characterizes a number of new initiatives as being funded through "mandatory spending," meaning that additional funding required for these purposes would be offset through revenue enhancements such as taxes, fees, cost reductions, and other levies proposed elsewhere in the budget.]

Agency By Agency

Department of Education

- The Department of Education discretionary budget is proposed at $69.4 billion, an increase of $1.3 billion or 2 percent over FY 2016 levels. You can see the overall DoEd budget narrative here.
- **Authorized Every Student Succeeds Act (ESSA) Programs**
    - Supporting Effective Instruction State Grants (Title II): $2.25 billion (-$150.2 million to FY2016). This major state formula grants program provides funds to each state to support improvements in the quality and effectiveness of educators and school leaders, increase their numbers, and address equity issues in instructuction and opportunity gaps. One significant change under ESSA is that the new law spells out a number of ways states and districts can use these

funds to support STEM-related professional develop and other teacher quality initiatives.

- Student Support and Academic Enrichment Grants (Title IV): $500 million (new). Under ESSA, this new Title IV program would provide formula grant directly to districts to assist in delivering a well-rounded education to their students through a range of locally determined activities, including support for STEM education, the arts, student-support services, and effective use of educational technology in schools. The Administration has proposed that these funds instead be awarded to districts through state-level competitions. The Department is also planning to release guidance to states, districts and the broader education sector this year on funding opportunities for STEM and CS.

- Education Innovation and Research (EIR): $180 million (+$60 million to FY2016). The successor to the Investing in Innovation (i3) program and authorized in ESSA. The EIR program supports evidence-based initiatives to develop, validate, and scale up effective education interventions. Has had a significant STEM focus in prior years and this year's proposal is also designed to complement an expansion of the NSF's Discovery Research K-12 STEM teaching and learning initiative. A portion of these funds will be reserved for the proposed Advanced Research Projects Agency - Education (ARPA-ED).

- STEM Master Teacher Corps: $10 million (new). Proposes a national STEM Master Teacher Corps, one of the specific "national activities" authorized under ESSA.

- 21st Century Community Learning Centers: $1.0 billion (-$166.7 million to FY 2016). The major source of federal support for locally-based out-of-school learning and enrichment activities. As proposed, program funds may be used to support activities that are included as part of an expanded learning time program.

- **New Program Proposals**

  - Computer Science For All (Mandatory): $2 billion (new). States submitting qualified grant applications would receive formula-based allocations to provide widespread access to computer science learning opportunities in preschool through grade 8, preparing and further developing computer science teachers and support staff, and increasing access for underserved and disadvantaged students to other rigorous and advanced courses and programs, including Advanced Placement and International Baccalaureate courses and dual or concurrent enrollment programs. States also would be encouraged to partner with one or more institutions of higher education, nonprofit organizations, and

other public and private entities, including businesses and industry-affiliated organizations.

- Computer Science for All (Discretionary): $100 million (new). A competitive grant program that would award slected states with funding to promote innovative strategies to provide high-quality instruction and other learning opportunities in computer science (including computer programming and related skills such as computational thinking) in preschool through grade 12.

- Creating Next-Generation High Schools: $80 million (new). A repetition of a prior year proposal to launch Next-Generation High Schools that will be laboratories for cutting-edge STEM teaching and learning.

National Science Foundation

- The National Science Foundation budget is proposed at $7.964 billion, an increase of $500 million or 6.7 percent over FY 2016 levels. You can see the NSF budget narrative here.

- The NSF's Education and Human Resources Directorate is proposed at $952.86 million, an increase of $72.86 million or 8.3% over FY 2016. $53.99 million of this proposed increase is in the form of mandatory spending[1]. You can see the EHR budget narrative here.

- Advancing Informal Science Learning: $62.5 million (same as FY 2016). $7.5 million of this total would be mandatory funding. The proposal would continue the AISL focus on supporting research projects that utilize informal learning environments in novel ways to engage students from groups traditionally underrepresented in STEM.

- STEM+Computer Science Partnerships Program: $51.88 million (same as FY 2016). $30.64 million of this amount would be mandatory spending. The STEM + C Partnerships program advances research on and development of innovative courses, curriculum, course materials, pedagogies, instructional strategies, and models that integrate computing into one or more other STEM disciplines. This program is also a key foundation for the Administration's *Computer Science for All* proposal.

- Robert Noyce Teacher Scholarships: $60.89 million (same as FY 2016). The NSF's flagship STEM teacher preparation program continues unchanged.

- Improving Undergraduate STEM Learning: $92.5 million(+$5 million to FY2016). This funding will support scaling evidence-based practices; advancing the knowledge base for undergraduate research, including course-based research; and developing and

identifying indicators, metrics, and assessments to measure readiness for and progress toward widespread use of evidence-based resources in undergraduate STEM instruction

Other Agency Highlights

- National Institutes of Health: $17 million for the National Institutes of Health (NIH) to invest in the Science Education Partnership Award (SEPA) program, leveraging the expertise of the biomedical research community to support innovative curricula in K-12 schools

- Environmental Protection Agency: $4 million for the Environmental Protection Agency (EPA) to invest in environmental-education grants.

- Department of Defense: $11 million for the Department of Defense (DoD) for expanding STEM opportunities for children of military families. The DoD investments build on a multi-year record of success under the National Math and Science Initiative's (NMSI) Initiative for Military Families.

- NASA: Continues to provide opportunities for educators, learners and institutions that are consistent with the goals, objectives, and strategies of the Five-Year Federal Strategic Plan on STEM Education. Also provides $25 million to the competed NASA Science Mission Directorate Program which connects NASA science experts and content to learners of all ages.

- Corporation for National and Community Service: In FY 2017, AmeriCorps VISTA will help to expand STEM education by supporting partnerships such as those with US FIRST, US2020 and the California State University system. These partnerships engage students, faculty/staff, and community partners to bolster the number of low income/underserved (low socio-economic) and underrepresented (minority, female, rural) students who pursue and obtain STEM-related degrees. This program will expand on the partnership CNCS has with the National Science Foundation, in collaboration with 100Kin10 to help thousands of teachers access the Education Awards, which will enable them to learn computer science fundamentals, and teach and inspire the next generation of great innovators, problem-solvers, and STEM teachers.