

ESSA & Funding the **STEM Master Teacher Corps**: Fulfilling the nation's promise for K-12 STEM education

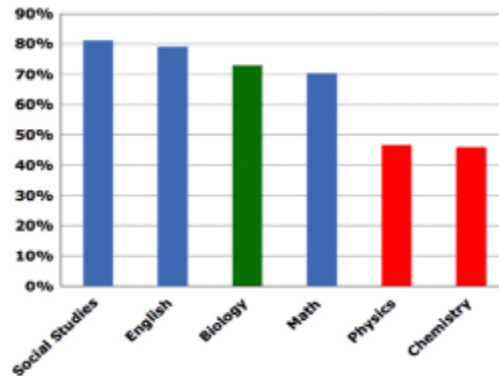
Education faces glaring and growing shortages in highly-qualified K-12 STEM teachers.

High quality STEM education is vital to U.S. national security and prosperity. However, an overwhelming majority of students are being taught subjects outside of their teachers' area of content expertise. There is little support for quality professional development and collaboration with master teachers. The resulting low rates of recruitment and retention of high-quality STEM teachers are crises for the nation.

A STEM Master Teacher Corps will be a national asset and raise the prestige of teaching.

Although not yet funded, the STEM Master Teacher Corps is authorized by the Every Student Succeeds Act (ESSA), Section 2245. The work of the corps of teachers would include "scholarly communities" and participation in and leading of "high quality-professional development."

High School Classes that are Taught by a Teacher with a Degree in the Subject



Source: Dept. of Ed.

Leaders in STEM and education support the implementation of a STEM Master Teacher Corps.

The President's Council of Advisors on Science and Technology recommended the creation of a STEM Master Teacher Corps in their *Prepare and Inspire* report to both reward and engage the top tier of STEM educators (2010). Titled a "STEM Master Teacher Corps," this initiative would go beyond recognition to include an interactive community and a national network that would allow these exemplar educators to "serve as mentors, leaders in their schools, liaisons to public officials," to "share best practices and materials" with their peers, "to provide a voice for their profession in educational policy, and to be effective advocates for STEM in their schools, school districts, and communities." These sentiments have been echoed in President Obama's State of the Union address (2012), a National Science Foundation Dear Colleague Letter (2015), reports by the National Academies (2014) and the Department of Education, where STEM teacher leadership is currently a topic of study (2016).

Master STEM teachers are an existing but underused national asset.

Programs such as the Presidential Award for Excellence in Math and Science Teaching, the Albert Einstein Distinguished Educator Fellowship, and the National Board for Teacher Certification, among others, have identified thousands of STEM Master Teachers. However, very few programs have gone beyond teacher recognition to network these teachers for their engagement in meaningful, long-term efforts to improve STEM education.

Funding the STEM Master Teacher Corps in ESSA will harness the expertise of master teachers to improve STEM education.

The funding of a STEM Master Teacher Corps could allow states to engage teachers to:

- improve STEM teacher practice through mentorship, induction, and peer-led professional development,
- support the next generation of STEM educators through recruitment programs and as cooperating teachers and teachers-in-residence at teacher preparation universities and programs,
- influence education policy as liaisons to local, state, and national administrators, legislators, agencies, and professional societies, and
- serve as ambassadors for the teaching profession to K-12 students and their families, higher education institutions, companies, and the wider community.