

## Business and Foundations Roles for the Recruitment, Retention and Renewal of Mathematics and Science Teachers

<b>RECRUITMENT</b>		
<i>Strengthen teacher recruitment policies in mathematics and science.</i>		
<b>Implement a comprehensive package of mathematics and science teacher education recruitment strategies, starting in P–12 and extending through graduate school, that include incentives such as scholarships, signing bonuses, and differential pay.</b>	<b>Strengthen the content and pedagogy of teacher preparation programs to ensure a national mathematics and science teacher workforce capable of preparing P–12 students for success in higher education and the workplace.</b>	<b>Expand strategies to attract talented individuals in STEM-related professions to teaching, and ensure that they are adequately trained for the classroom.</b>
<b>ROLES FOR BUSINESS AND FOUNDATIONS</b>		
<p>Fund and support school-, district-, and state-level recruitment programs at the middle, secondary, undergraduate, and graduate levels that promote mathematics and science teaching as an attractive profession.</p> <p>Conduct a sustained, professionally designed, multi-media, national campaign to encourage talented students and mathematics and science professionals to commit to a career in mathematics and science teaching.</p> <p>Sponsor programs that introduce middle and secondary school students to professional mathematics and science education organizations and that engage them in activities to nurture interest in STEM fields, such as mentoring and tutoring.</p>	<p>Sponsor both undergraduate teacher education programs at two- and four-year higher education institutions and graduate programs for those seeking a degree in mathematics education or science education.</p> <p>Endow teaching chairs in the departments of mathematics and the sciences to promote collaboration between the colleges of arts and sciences and the college of education.</p> <p>Sponsor student affiliate groups of the National Council of Teachers of Mathematics and the National Science Teachers Association.</p>	<p>Support and evaluate existing alternative licensure programs for STEM professionals interested in becoming mathematics and science teachers.</p> <p>Sponsor a graduate program for STEM professionals interested in pursuing a graduate degree in mathematics education or science education.</p> <p>Promote efforts to create a national adjunct teacher corps that will prepare qualified STEM professionals currently working outside of teaching to teach in classrooms on a part-time basis, and provide incentives for employees to participate in the program.</p>

*Transforming the Recruitment, Retention, and Renewal of Our Nation's Mathematics and Science Teaching Workforce*

**Business and Foundations Roles for the Recruitment, Retention and Renewal of Mathematics and Science Teachers** (CONTINUED)

**RETENTION**  
*Improve the retention of both new and experienced teachers, and address the causes of teacher dissatisfaction.*

<b>Develop and implement research-based induction programs for all new mathematics and science teachers.</b>	<b>Implement comprehensive policies and programs that address the leading causes of teacher job dissatisfaction, including inadequate compensation, lack of administration support, and professional isolation.</b>
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**ROLES FOR BUSINESS AND FOUNDATIONS**

<p>Sponsor and support comprehensive, research-based induction programs.</p> <p>Provide content-based summer programs and externships for new teachers that will provide them with practical experiences to broaden their perspective, a better understanding of skill requirements needed in the modern workplace, and connections to professional scientific communities.</p>	<p>Provide content-based summer externships and other employment opportunities to veteran teachers in order to raise their overall compensation level to that of comparable mathematics and science professionals and to expose them to the broader scientific community.</p> <p>Promote P-12 mathematics and science teaching as an attractive and respected profession with special honors and recognition, including monetary awards.</p> <p>Advocate nationally in support of competitive teacher salaries, and take a lead role in seeking solutions (and funding) for problems such as out-of-field teaching, poor administration support, inadequate induction programs, and inappropriate and ineffective professional development.</p> <p>Sponsor and support efforts to upgrade high school laboratory facilities and classroom technology and train teachers to incorporate new technology into their curriculum.</p>
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**RENEWAL**  
*Ensure that all mathematics and science teachers participate in renewal activities that support their effectiveness in the classroom.*

<b>Provide ongoing, research-based professional development programs, focused on both content and pedagogy, for all mathematics and science teachers.</b>	<b>Revamp teacher license renewal programs to incorporate measures of teacher effectiveness.</b>	<b>Establish comprehensive statewide data collection systems that track student progress, teacher effectiveness, and employment trends of mathematics and science teachers.</b>
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**ROLES FOR BUSINESS AND FOUNDATIONS**

<p>Provide content-based professional experiences for veteran teachers that will provide them with practical experiences to broaden their perspective, a better understanding of skill requirements needed in the modern workplace, and connections to professional scientific communities.</p> <p>Sponsor a graduate program for practicing mathematics and science teachers seeking a master's degree or Ph.D. in mathematics, science, mathematics education, or science education.</p>	<p>Work with the state, school districts, and business to identify the knowledge and skills that are required of mathematics and science teachers to prepare students to transition into higher education or the workforce.</p>	<p>Champion public support for statewide collection, analysis, and reporting of data on educational progress.</p> <p>Share knowledge and expertise with state leaders on data systems and data-driven decision-making.</p>
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