

Recommendations from <i>Successful K-12 STEM Education (2011)</i>	Indicators
<i>Districts Should Consider All Three Models of STEM-Focused Schools</i>	1. Number of, and enrollment in, different types of STEM schools and programs in each district.
<i>Districts Should Devote Adequate Instructional Time and Resources to Science in Grades K-5</i>	2. Time allocated to teach science in grades K-5.
	3. Science-related learning opportunities in elementary schools.
<i>Districts Should Ensure That Their STEM Curricula Are Focused on the Most Important Topics in Each Discipline, Are Rigorous, and Are Articulated as a Sequence of Topics and Performances</i>	4. Adoption of instructional materials in grades K-12 that embody the <i>Common Core State Standards for Mathematics</i> and <i>A Framework for K-12 Science Education</i>.*
	5. Classroom coverage of content and practices in the <i>Common Core State Standards</i> and <i>A Framework for K-12 Science Education</i>.
<i>Districts Need to Enhance the Capacity of K-12 Teachers</i>	6. Teachers' science and mathematics content knowledge for teaching.
	7. Teachers' participation in STEM-specific professional development activities.
<i>Districts Should Provide Instructional Leaders with Professional Development That Helps Them to Create the School Conditions That Appear to Support Student Achievement</i>	8. Instructional leaders' participation in professional development on creating conditions that support STEM learning.
<i>Policy Makers at the National, State, and Local Levels Should Elevate Science to the Same Level of Importance as Reading and Mathematics</i>	9. Inclusion of science in federal and state accountability systems.
	10. Inclusion of science in major federal K-12 education initiatives.
	11. State and district staff dedicated to supporting science instruction.
<i>States and National Organizations Should Develop Effective Systems of Assessment That Are Aligned with A Framework for K-12 Science Education and That Emphasize Science Practices Rather Than Mere Factual Recall</i>	12. States' use of assessments that measure the core concepts and practices of science and mathematics disciplines.
<i>National and State Policy Makers Should Invest in a Coherent, Focused, and Sustained Set of Supports for STEM Teachers</i>	13. State and federal expenditures dedicated to improving the K-12 STEM teaching workforce.
<i>Federal Agencies Should Support Research That Disentangles the Effects of School Practice from Student Selection, Recognizes the Importance of Contextual Variables, and Allows for Longitudinal Assessments of Student Outcomes</i>	14. Federal funding for the research identified in <i>Successful K-12 STEM Education</i>.

*Because the *Next Generation Science Standards* had not been published at the time of this report, the committee used *A Framework for K-12 Science Education* (National Research Council, 2012) to develop Indicators 4, 5, and 12. These indicators can be tracked in relation to the *Next Generation Science Standards* when they are published.