

2013-01

# STEM Education Policy Resolution

The National Association of Academies of Science

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The Ohio Journal of Science, v111, n2-5 (January, 2013), 58.

<http://hdl.handle.net/1811/53716>

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## STEM EDUCATION POLICY RESOLUTION

\*National Association of Academies of Science (NAAS)

### *Adherence by STEM schools and STEM education programs to scientific inquiry and technological or engineering design*

**WHEREAS**, STEM Education is both the mastery and integration of Science, Technology, Engineering and Mathematics to embed STEM concepts, methodologies and skills into the habits of mind and actions of daily life for all PK-12 students; and

**WHEREAS**, STEM Education incorporates scientific inquiry and technological or engineering design through student-focused, project based curricula to develop skills of communication, teamwork/ collaboration, creativity/innovation, critical thinking, and problem solving; and

**WHEREAS**, Science is a systematic method of continual investigations, based on observation, hypothesis testing, measurement, experimentation and theory building, which lead to more accurate explanations of natural phenomena, explanations that are open to further testing and revision and are accepted or rejected on the basis of empirical evidence; and

**WHEREAS**, Technology modifies the natural world through innovative processes, systems, structures and devices to extend human abilities; and

**WHEREAS**, Engineering is design under constraint that develops and applies technology to satisfy human needs and wants; and

**WHEREAS**, Mathematics is the concise language of nature that scaffolds, symbolizes, describes and defines the limits and relationships of science, technology and engineering.

**WHEREAS**, Technology and engineering, coupled with knowledge and methods derived from science and mathematics, create social and environmental value and economic wealth to improve the quality of life; and

**WHEREAS**, Integration of science, technology, engineering and mathematics into STEM curricula and activities should produce novel results and solutions to vexing questions in healthcare and disease prevention, energy, the environment, agriculture, sustainability, aerospace and manufacturing.

**BE IT THEREFORE RESOLVED THAT:**

**The National Association of Academies of Science urges all STEM schools, STEM education programs or other variations of STEM activities for students to adhere to the fundamentals of science, technology, engineering and mathematics and to ensure that their students shall conduct original research and technological or engineering design projects that contribute to a fuller understanding and enrichment of the world rather than simply repeating previous research or template experiments.**