

Engineering is Elementary®: A Summary of Research Results 2004–2014

EiE research on students suggests

- Students who experience EiE show greater gains in science learning than students who use traditional science curricula
- EiE fosters improved attitudes about the value of science and engineering in all students, but particularly girls



- EiE promotes students' interest in science and engineering careers
- EiE addresses students' misconceptions about engineering and technology, helping them gain a more accurate, standards-based understanding
- EiE promotes students' knowledge of engineering content and awareness of the diverse fields of engineering

Research on teachers suggests

- Teachers who use EiE notice their students (especially underrepresented racial minorities) are more engaged. Students improve their performance in science, and in school in general
- Teachers who experience EiE's professional development feel more prepared to teach engineering, technology, and problem-solving
- Teachers rate EiE as "thoughtfully developed," "easy to use," and "more effective than traditional science curricula alone" in helping students make real-world connections to classroom learning
- Teachers find EiE develops 21st century skills such as collaboration, creativity, and problem-solving

EiE's research team is currently undertaking a rigorous, NSF-supported efficacy study that further examines EiE impacts on students and teachers by making direct comparisons with other curricula. Results of this study will be available by 2017.



To see the original research reports on these findings and more, visit EiE.org/content/research-evaluation-and-publications

Research Based. Classroom Tested.

Engineering is Elementary (EiE) is a nationally renowned education project developed by the Museum of Science, Boston. EiE addresses America's pressing need for effective STEM education, or classroom instruction in science, technology, engineering, and math, through three initiatives:

- Curriculum development
- Professional development for teachers and teacher educators
- A comprehensive program of educational research and evaluation

EiE's signature accomplishment is a rigorously researched, classroom-tested curriculum that integrates engineering and technology concepts and skills with elementary science topics. Used in all 50 states, EiE has already reached nearly 5 million children in grades 1 – 5.

Support for EiE comes from the National Science Foundation as well as major corporations and foundations.

Highly Engaging. Cross Curricular Integration.

The EiE curriculum is expressly designed to

- Foster science and engineering learning and technological literacy
- Help all students, but especially girls, minorities, and other underrepresented groups, recognize their ability to engineer
- Build enthusiasm for engineering as a career choice
- EiE aligns with state and national science standards, as well as Common Core and NESS.
- Innovative problem solving fosters critical thinking, collaboration, communication, creativity, flexibility, persistence, and learning from failure.



Evaluation by EiE and external evaluators has repeatedly evidenced the curriculum's effectiveness. See the key findings on the reverse or visit eie.org/eie-curriculum/eie-research for more information.

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