Despite the growing pressure to conserve and sustainably manage our natural resources, environmental education is neglected in many school curriculums. Many schools also struggle with poor student performance and Michigan children are among the lowest performing in the country. At the Henry Ford Academy Elementary School in Detroit, budget cuts in the education sector have left STEAM (Science, Technology, Engineering, Art and Mathematics) curriculum to the wayside.

**PROJECT OVERVIEW**

SustainEd aims to increase preparedness for, and interest in, STEAM disciplines among students from underserved communities. The project fills the gaps in everyday curriculum through hands-on learning by integrating fundamental STEAM principles with skills in problem-solving and critical-thinking. In partnership with the Henry Ford Academy Elementary School, we engage students in real world challenges that they can relate to inside and out of the classroom. We have developed an after school curriculum that incorporates experiential learning activities and field trips to encourage involvement and generate curiosity.

**OUR IMPACT**

Students become advocates for the environment while developing the skills required to be innovative problem solvers. The curriculum serves as a great opportunity for STEAM learning and the skills learned can lead to improved school performance. Students develop camaraderie and trust which facilitates teamwork and bolsters peer support, which is invaluable for student achievement.

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**Topics include ecosystems, physics and engineering principles, filtration, renewable energy and recycling.**

Students create solar ovens, learn to compost, perform water filtration activities, and grow their own ecosystems.

Hands-on sustainable technology builds include an aquaponics water distribution piping network and a bridge model.

Destinations include Recycle Up!, Matthaei Botanical Gardens, an aquaponics lab, and U-M’s LEED certified Dana building.

**To learn more about our projects, visit swb.seas.umich.edu**