

Building, brainstorming, and believing in future possibilities: Collaborative STEM Meets Humanities robotics program inspires Madison County youth

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EDWARDSVILLE - Madison County youth are designing, building and testing rovers, or space exploration vehicles, through the collaborative STEM Meets Humanities

robotics program, presented in partnership by the Southern Illinois University Edwardsville STEM Center, Mannie Jackson Center for the Humanities (MJCH) and Madison County Housing Authority (MCHA).

Students ranging in age from five to 14 are participating in the robotics program being offered once a week for four-weeks this summer as part of the MCHA Summer Program in the communities of Venice, Madison, Collinsville and Alton.

“Our main goal is to show students, especially those who may not always get a hands-on engineering or science opportunity, that they are capable and have the skills needed to be successful in STEM-related fields,” said Candi Johnson, with the SIUE STEM Center and coordinator of the MJCHF STEM Meets Humanities program. In this program, they’re designing and building rovers. They will also have a chance through challenges to design and engineer a few pieces of the rover to solve certain problems.”

In Alton, 8-year-old Jalen Mclemore worked one-on-one with SIUE junior Gaige Crowell to construct his rover.

“We need to put two speed controls in place,” Mclemore read aloud from his instruction sheet.

“Perfect. Just match the numbers on the two pieces to add the controls,” responded Crowell, a junior studying construction in the School of Engineering.

Crowell, an East St. Louis native, is assisting students in the robotics program all summer. He is completing an internship through the SIUE Robert J. Noyce Scholarship Science and Math Grants funded by the National Science Foundation.

“This is my second summer as a Noyce intern,” Crowell explained. “I love working with kids and hope to do so in the future. Helping inspire students like Jalen is giving me great experience. I most enjoy seeing the look on the kids’ faces when they do something they’ve never done before. It’s cool exposing them to new things.”

“This is really fun,” exclaimed 10-year-old Kennedy Lacey as she added wheels to her rover. “I’m happy I came today.”

“I can’t wait to test it out,” added 7-year-old Aria Isom. “I like to try new things every day.”

“We’re showing students how a rover is kind of an extension of their senses,” Johnson added. “We’ll be adding cameras to our rovers, and perhaps in future semesters, we can add a robotic arm so students can be on Mars, so to speak, and grab things and collect

data. This would allow them to see how we can use machines to our benefit as engineers and scientists.”

Johnson also has plans for incorporating environmental engineering in future semesters.

“The robotics program was a great new experience for our children,” said Marie Nelson, program director with the MCHA. “All of the participants were engaged and eager to learn how to build and operate a rover. The program sparked their interest in STEM, allowed them to explore real-world challenges and built their skills for the future.”

“It is incredibly gratifying to see the spark and excitement on the faces of these young people,” said Ed Hightower, Executive Director of Mannie Jackson Center for the Humanities. “This experience will provide a foundation for these youth to engage in engineering and science discovery that will have lasting impact on their lives. We look forward to extending these opportunities throughout the 2018-19 school year.”

The Southern Illinois University Edwardsville [Center for STEM Research, Education and Outreach](#) comprises an independent group of researchers and educators, innovating ways to engage students and the public in science, technology, engineering and math (STEM). Within the SIUE Graduate School, the Center brings together research faculty, graduate students and practitioners to conduct education research. The Center contributes educational expertise to SIUE undergraduate classes and provides professional development for K-12 teachers. The Center boasts a significant library of equipment and resources, which are available for loan at no cost to campus and regional instructors. For more information, visit <https://www.siue.edu/stem/about.shtml> or contact STEM Center Director Sharon Locke at (618) 650-3065 or stemcenter@siue.edu.

[Madison County Housing Authority](#) Mission Statement: To provide safe, quality affordable housing to low income families in Madison County; and to promote personal responsibility and self-sufficiency of residents while maintaining the fiscal integrity of the agency.

[Mannie Jackson Center for the Humanities](#) Mission Statement: The MJCH conducts activities that promote mutual understanding and respect among people of different cultures, races, ethnicities, religions, and other distinctions; influence positive social change by transforming attitudes and perceptions towards greater acceptance, tolerance, and interaction among these groups; and ultimately remove barriers that hinder individuals and groups from realizing their aspirations and full potential.