

Swormville Catholic school excels in Future City comp

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As area Catholic schools embrace STREAM education, it's helping to transform perceptions about private religious education. One example occurred in January, as St. Mary School of Swormville placed third overall in the annual Future City Competition held at Mount St. Mary Academy in Kenmore.

The event is an annual engineering competition run by futurecity.org, a national program that calls for student groups to design a city infrastructure in the future that can meet a particular challenge. This year, the theme was to create a resilient power source system that can withstand a natural disaster. The student groups are called to research and design a city for the competition with a budget of only \$100.

The student group at St. Mary's meets as part of an afterschool program to prepare for the competition. While the competition was in January, the students have been preparing for it since the summer as the academic year was kicking into gear. They also work with an outside engineering mentor – Paul Kluczynski, who is also a member of the St. Mary parish. This is Kluczynski's fifth year helping the student group; he works with the American Society of Mechanical Engineers to promote the Future City Competition.

"We actually have a few meetings in the summer," said Julie Leong, teacher mentor for the student group and middle school teacher for grammar, vocabulary and religion. "Once school starts in September, we hit the ground running."

As the student group prepared for the competition, they had to decide where in the world they wanted to place their city, and then research what was the most likely natural disaster that can occur in that region. At St. Mary's, the choice was Havana, Cuba, and the disaster was hurricanes.

From there, it's onto scientific



COURTESY OF JULIE LEONG/ST. MARY SCHOOL

Students at St. Mary School in Swormville had an excellent day at the Future Cities competition in January, placing third overall, top scoring Catholic school and special recognition for their energy efficiency presentation.

research on the types of power grids in existence today, and what could be possible 100 years from now. The group uses a SimCity program to help chart and plan their progress, build a physical model and develop a 1,500 word written essay.

"They elect to participate in it," Leong said of her students. "We all compete together, no matter how your (particular) school handles it. For us to be the small Catholic school that we are and not having it in the science curriculum, it was a remarkable outcome to be in third place."

Once the group gets to the competition to display their work, three students from the team have to deliver an oral presentation on their project, as well as answer questions from a group of engineering judges.

St. Mary's won over the judges in the competition, not only with their third place victory (and top area Catholic school score), but also

earning an additional achievement for their energy efficiency initiative: using nuclear fusion and ocean thermal energy on their Future City. In total, the students won \$950 for their efforts, and the funds will go back into St. Mary's STREAM (Science, Technology, Religion, Engineering, Arts and Mathematics) program.

"This was a very exciting surprise," said Kluczynski. "The deliverables were extensive in researching, planning and designing a city with all the infrastructure, systems and facilities. The team responded and adapted to the challenges. They understood the task, thought out solutions and communicated through digital simulation, essay, model building and presentation. The group worked together and stayed on script with a good blend of organization and imagination. A job well done."

The nine students who compet-

ed for St. Mary's were Ada Bastedo, Maryanna Diagler, Jioia D'Andrea Mucciarelli, Mary Quinn, Ryan Zgoda, Lauren Zwirecki, Mia Gilham, David Hatcher and Alex Kania. St. Mary School has participated in the Future City Competition for over a dozen years, and even made it to the national competition three times since 2010.

A competition like Future City helps students employ the lessons they learn from STREAM programs and apply them to real-world scenarios. The Havana/hurricane combination applies, as their neighboring island Puerto Rico is still recovering from the devastating 2017 storm that crippled its infrastructure.

"We actually have a student at St. Mary's who came here because his grandparents were in Buffalo," Leong said. "He came here because it was such a disaster in Puerto Rico. It was an interesting weaving of events."