



S3 Scholars in the early stages of building model rockets.

Summer of STEM

S³ puts a new spin on summer school **BY DANTE LAPENTA**

STEM RELATED JOBS are on the rise ... with no end in sight. The United States projects significant increases in the national demand for STEM related jobs. By 2024, growth rates in mathematics and science occupations will balloon by more than 28 percent; computer occupations, which already account for a large amount of jobs, will increase another 6.5 percent. And these jobs pay well with 93 out of 100 STEM positions boasting wages higher than the national average. In Delaware, our state, business, and academic leaders have repeatedly asserted that a significant pool of First State future jobs will come from STEM industries. You only have to look as far as the Delaware Technology Park or University of Delaware's Science, Technology and Advanced Research (STAR) Campus to see those prophecies in action.

In response, Red Clay Consolidated School District is using the summer to get future STEM professionals ready. From June to August, Red Clay offers the STEM Summer Scholar Program (S³) for rising fifth through eighth graders. Using challenging, problem-based investigations,

it prepares students for the rigor of high school science and technology coursework. Lessons cover research application, expository writing, and public presentation of scientific arguments, to name a few.

District science supervisor Edward McGrath launched the program in 2011 using funds from the Race to the Top initiative, and stretching the budget by using lab equipment already owned by the district and reusing as many materials as possible. S³ reached 370 students in 2017, up from 181 since its inception. He sees it as a chance for students to creatively solve problems and make the world a better place.

"When people think of 'summer school,' they picture dragging kids away from summer fun to make up work or to reinforce skills that need to be strengthened. This program is neither," explained McGrath, who coordinates projects, enrollments, and staffing. "S³ is an opportunity for students to explore some nugget of curiosity that they didn't get to explore during the school year."

Parents agree.

Superstars in Education

“My daughters both enjoyed the enrichment opportunities to deeper explore interesting topics, like the science of musical instruments, computer programming and robotics,” said Red Clay parent and teacher Brandi Mycoff. “The program showcases STEM in a fun, interactive way that promotes greater interest in the field. That’s something I, as a science teacher, feel passionate about — especially raising two daughters.”

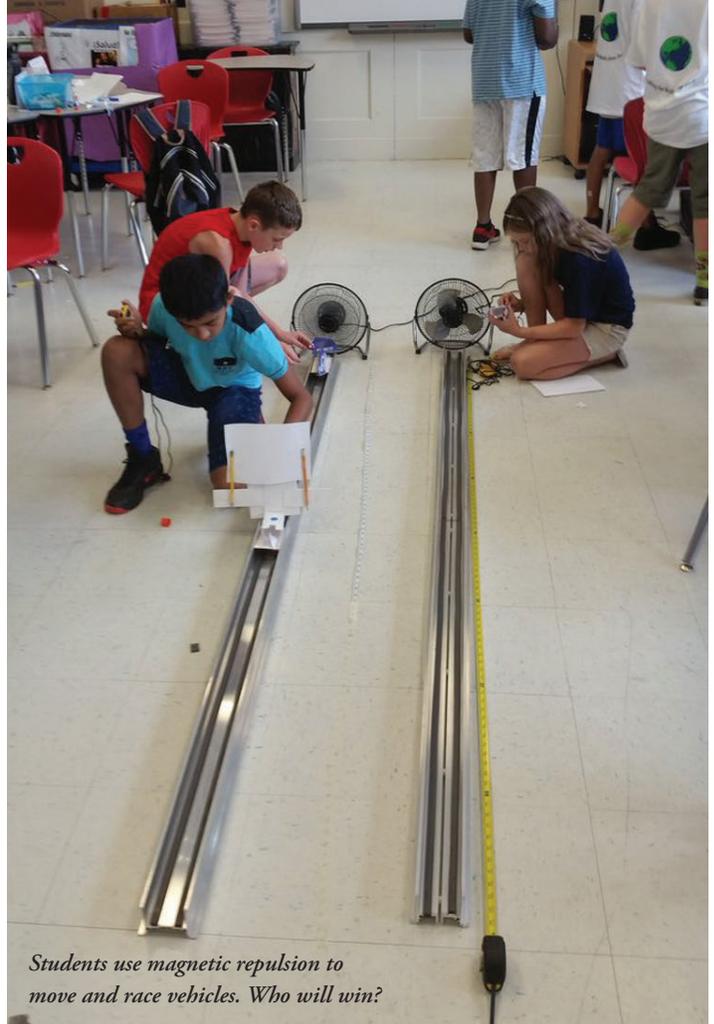
While the program takes place during students’ latter elementary and middle school years, its impact is felt later — even during college decision-making.

“The program gave my daughter a clearer idea of which direction she wanted to pursue in college — the field of engineering,” added Lori Spector, whose daughter graduated from Conrad Schools of Science.

Additionally, S³ goes beyond STEM concepts and into the modern workplace, which necessitates that employees solve problems from a variety of perspectives, work on interdisciplinary teams and develop novel strategies.

“These strategies take time to develop, and day-to-day demands of the school day often detract from the ability to develop these skills,” stressed McGrath. “Our program allows students to spend an entire morning working on a specific challenge, or several days to solve a larger problem.”

In a relaxed, camp-style environment, Red Clay students team up to create unique solutions to challenges. If a solution is ineffective, the students refine their strategy or test a different one. While the solutions are wonderful, perhaps equally as important is the development of collaboration and compromise skills, which are essential in today’s team-based work environments. ■



Students use magnetic repulsion to move and race vehicles. Who will win?

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