Students attend STEMsmart Summit

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STAFF WRITER

SOUTH VENICE — On Saturday, 220 area middle and high school students spent the day at State College of Florida’s Venice campus as part of a fun and educational science and technology summit, to which the Gulf Coast Community Foundation played host.

The STEMsmart Summit, part of the STEMsmart initiative, culminated STEMsmart week, which ran Feb. 13-18. The initiative, made possible by a five-year, $2.5 million grant from the GCCF, aims to increase student participation and inspire them to seek careers in science, technology, engineering and math. Students from eight schools — Laurel-Nokomis, Venice, Heron Creek, Woodland and L.A. Ainger middle schools; and Venice, North Port and Lemon Bay high schools — signed up for four, hourlong classes focusing on different STEM concepts.

Before that, however, students were addressed by Salim Ismail, a Silicon Valley entrepreneur and strategist who, among many accomplishments, was a vice president at Yahoo! He gave a short presentation about emerging technologies, including 3D printers, robots that display emotion, and vehicles that drive themselves.

“Today, if you can conceive of a subject, you can build it,” he said, adding the cost of technology is dropping so dramatically that it is more affordable than ever. “Your life will be so utterly different from your parents’ lives that they won’t even recognize it.

“This entire (STEM) initiative is very, very important,” he said, adding technology will help solve big issues facing humanity, and that today’s young people will think of things their parents and grandparents could never envision. “STEM is critical. This is the basis for all employment in the future.”

The different class sessions were scattered about the SCF campus. In one lab, middle school students listened as SCF professor Jose Ors explained how fireworks are made.

“They pack the tubes with different kinds of salts based on what colors they want,” he said, sending pairs of students to stations where they applied small amounts of different salts — lithium, copper nitrate, potassium and sodium — to an open flame. Lithium burned red, copper green. At one station, VMS sixth-graders Kelton Radefeld, 12, and Christian Seiders, 11, watched the flame change colors as they burned copper, lithium and potassium at the same time.

“I wonder if that’s how they made the different lightsaber colors in Star Wars?” Christian pondered.
Ors told students that astronomers also note the colors of stars in the sky.

“That’s how they know what elements they are made from,” he said.

Other sessions offered students the chance to determine which STEM career might best fit them, to explore microscopic organisms in pond water, to learn how math is used in architecture, to simulate the transmission of infectious diseases, to learn more about rescuing and rehabilitating marine life, or to use 3D design software to create and print their own designs on SCF’s 3D printer.

In the “DNA Fingerprinting-Crime Scene Investigation” session, SCF adjunct instructor Aron Lemon had students testing DNA samples.

Asked what she wanted to learn most Saturday, Anna Sand-Lambert, 12, a sixth-grader at Laurel-Nokomis, quietly whispered “this” as Lemon began to explain the gel electrophoresis process.

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SCF Venice adjunct instructor Aron Lemon, left, demonstrates how to inject DNA for gel electrophoresis to Ashlyn Downey-Hayes, 11, a sixth-grader at Sarasota School of Arts & Sciences, SKY Academy sixth-grade student Brianna Trecartin, 11, and Andrea Stultz, 12, a Venice Middle School seventh-grader, during Saturday’s STEMsmart Summit to which the Gulf Coast Community Foundation played host.

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Heron Creek Middle School seventh-graders Brooke Fisher, 13, left, and Taylor Auer, 12, wait to see what color the flame would become as they burn a small amount of copper nitrate Saturday morning during the “Colors of Fireworks and Slippery SLIME” session at the STEMsmart Summit, held at State College of Florida’s Venice campus.