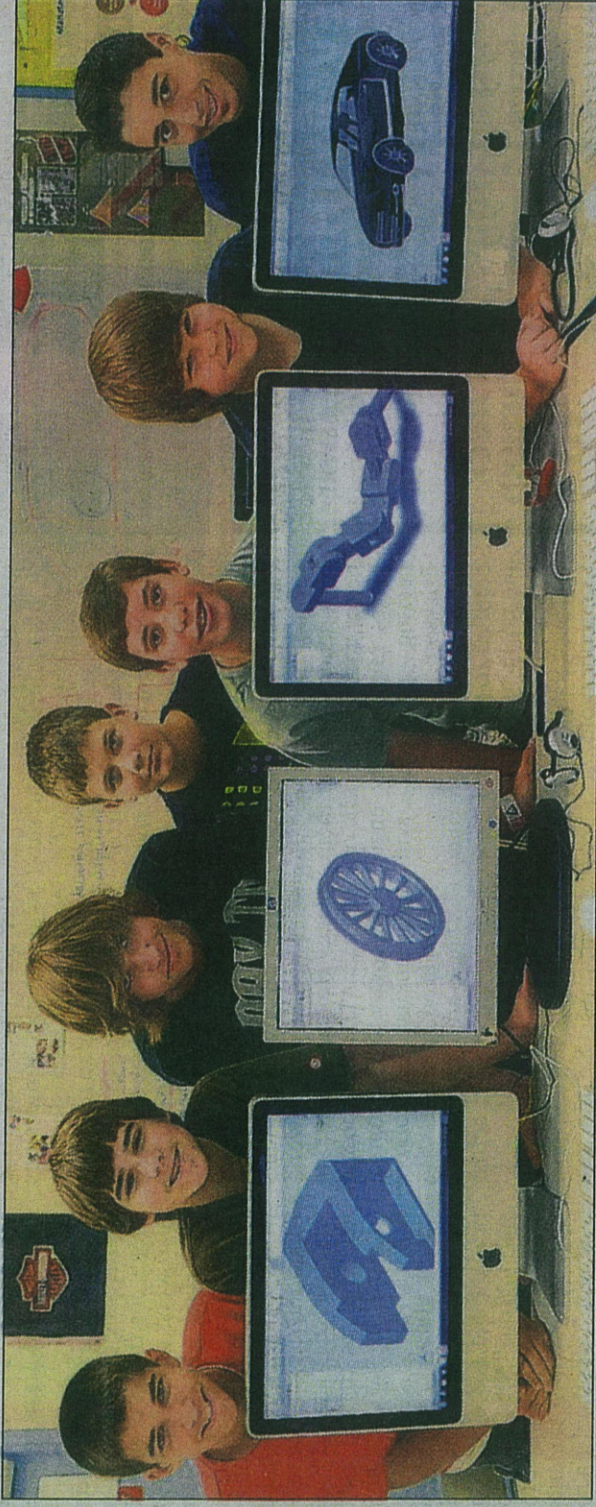


## MANATEE MIDDLE-SCHOOLERS PASS 3-D ENGINEERING TEST



Haile Middle School students, from left, Patrick Atkins, Devin Deitz, Benjamin Godshall, Zachary Scharoun, Nicholas Wendrick, Derek Depew and Tyler Strong, along with Jackson Newby, not pictured, all recently passed the industry certification for Solidworks, a 3-D engineering and design tool.

# A solid certification

**SOLIDWORKS:** Students' accomplishment comes as schools focus on careers

By CHRISTOPHER O'DONNELL  
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**EAST MANATEE** — There's a reason why the three-hour certification test in Solidworks, a three-dimensional engineering and design computer program, is typically taken in college or high school.

In the test, aspiring engineers must convert two-dimensional shapes into 3-D while completing frown-inducing calculations of dimensions and mass accurate to within 1 percent. Passing is usually a ticket to a high-paying job.

Given that, Solidworks officials were amazed when they learned that eight of nine students in an engineering-technology class at Haile Middle School in East Manatee passed their test.

Some 24,000 schools and colleges teach Solidworks worldwide. Company officials said it is the first time a middle-school class has been entered, let alone passed.

"It's a big thing for this middle school to have gone so far," said Marie Planchard, Solidworks director of education markets. "It's fantastic."

Teacher Justin Erickson decided to enter the eighth-graders for the exam after seeing how well they used the software to design and build objects like chairs and to fine-tune the aerodynamics of

**BELOW:** Zachary Scharoun, Nicholas Wendrick, Derek Depew and Devin Deitz are among the students in the engineering-technology class at Haile Middle School.



**RIGHT:** The Solidworks 3-D modeling tool is used to build prototypes of all sorts of objects.

**BELOW RIGHT:** Haile Middle School teacher Justin Erickson decided to enter the eighth-graders for the Solidworks exam after seeing how well they used the software.

STAFF PHOTOS / THOMAS BENDER



7-inch cars powered by compressed carbon-dioxide that students race in competitions.

It is the latest example of how the Manatee County School District is aggressively pushing to give more students skills needed in the workplace. In the 2010-11 school year, Manatee students took about 1,800 industry certifica-



tion exams. For each senior who graduates with a certification, the state awards high schools up to

See ENGINEER on 2B



Eight Haile Middle School students including Benjamin Godshall, above, and Nicholas Wendrick, below, recently passed the industry certification for Solidworks. Solidworks say they may be the youngest students ever to pass the tough test that requires students to solve equations while working designs. STAFF PHOTOS/THOMAS BENDER

# Middle-schoolers earn certification

ENGINEER from 1B \$1,200 and points toward their school grade.

Over the past four years, Manatee high schools received about \$580,000 in reward funds compared to about \$250,000 awarded to Sarasota County high schools.

"It's a priority for our students to leave school and be college ready," said Doug Wagner, Manatee director of career and technical education.

Having students take certifications at a younger age means the Haile students can now garner more advanced certifications in high school, making them better qualified for jobs or places in university engineering programs, said Erickson.

"These students are now certified to work and have the talent to do so," Erickson said. "It makes them real marketable on their college applications."

Equipping the technology lab at Haile with dozens of computers and devices including a milling machine and laser-engraver so students can turn designs into prototypes cost the district about \$200,000.

All but two Manatee middle schools have similar programs, part of an effort to produce a more skilled workforce and make an engineering career more accessible, said Wagner.

Both President Barack Obama and Florida Gov. Rick Scott have warned that schools and universities need to push more students into science, technology, engineering and math in order for Florida and the nation to attract companies that offer high-paying jobs.

Wagner said the class is proof that schools are focused on giving students skills needed in the workplace. He said there are more than 1,000 jobs posted on Monster.com by companies looking for workers skilled in Solidworks.

"These are high-demand, high-paying careers across the country," he said.

The nine students need two computers and three monitors to take the test, which has only 14 questions. Some questions take more than 30 minutes to answer.

Students find out immediately if they have passed.

"When I pressed the button that says 'Done,' my

heart was pumping," said Jason Newby, 14. "When it said I passed, I was so happy."

Derek DePew, 14, made engineering his top elective choice for the next school year when he transfers to Lakewood Ranch High School.

This year, he used Solidworks to design and build a 7-inch dragster car. The software includes a wind-tunnel simulator that he used to hone the car's aerodynamics.

"It's always cool when you look at your finished product and see what you started from," he said.

Haile plans to continue to offer the exam to students next year. The school is also investing in a three-dimensional printer for students to build more prototypes.

"What blows my mind is I have adult friends that do this line of work and these guys are 13 or 14," said Haile Principal Janet Kerley.



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