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The Road to Singapore

Manatee technology students travel the world, come out on top

How did it happen that two teams of Manatee County technology students competed against an estimated six million students from around the world—and ended up in Singapore?

It started back in middle school technology class. And the competition is called *F1 in Schools*. (*F1* stands for Formula One—you know, car racing?)

Five students from Southeast High School (SEHS), partnering with James Madison Middle School in Roanoke, Virginia, helped form *Team Unitus* and just won the World Championship F1 in Schools event in Singapore! Two students and a recent graduate from Braden River High School (BRHS), partnering with a team from Heinrich-Heine grammar school in Munich, helped form the *BayWa-F1 Team* and placed in the top ten! It is unprecedented to have two teams from Manatee County invited to the World Championship, and we're proud of our technology students, teachers, and advisors for once again putting Manatee County on the map. Technology Student Association (TSA) advisors Margi Nanney (SEHS) and Richard Platt (BRHS) accompanied their teams to Singapore for this exciting event.

F1 in Schools is an international competition in which teams of students design, manufacture, and race a small car out of balsa wood using 3-D computer aided design and manufacturing (CAD/CAM) tools. The cars are a marvel of engineering sophistication, and are powered by the force of a punctured CO₂ cartridge causing them to speed down an 80-foot track—in about one second.

They're that fast. Think pinewood derby with steroids and star wars.

But beyond the split-second timing of these engineering wonders, the competition involves so much more. Teams are judged and scored on the big picture—car speed (of course), reaction times, manufacturing techniques, an oral presentation, an animated video display, website, graphic design and packaging, and an entire portfolio of brochures, business cards, renderings, photographs, and maybe even a little bit of fairy dust to help with the more subjective aspects of judging.

But what's middle school got to do with it?

Manatee County students can start learning the engineering skills behind champion car racing as early as sixth grade. (Or even kindergarten, for those students attending an elementary school offering the groundbreaking *Engineering by Design* curriculum.) If they stick with the technology program through high school, including classes in Engineering 1–4 and an active role in the co-curricular TSA, they could master skills used by real engineers in top firms in the country.

According to Platt, who teaches Technology Education at BRHS, the F1 in Schools students applied 3-D CAD/CAM tool SolidWorks, Adobe InDesign, Illustrator, Dreamweaver, Flash, Photoshop, Premier, and Maxon Cinema 4D. They honed their design to cut milliseconds off of their times; applied geometry and computational fluid dynamics to their process; applied marketing and publicity skills; and caught a fine work ethic along the way. (One word: *employable*.)

One of the Manatee School District's EdVantage strategic objectives is for students to *actively engage in global outreach*. Both teams stood shoulder-to-shoulder with students from 18 countries while competing in Singapore. The BRHS team traveled to Munich last summer to collaborate with their German teammates.

"We attended the German school for nine days to prepare for this," said Platt. "We went to class every day; I even helped teach a class! When we left, students from both countries nearly cried, we bonded so much."

It doesn't get any more global than that.

Middle school technology classes, high school engineering classes, TSA, mad skills, tough competitions, lots of hard work...and that's how the road to Singapore started in middle school.

Well done, Manatee County technology students, teachers, and supporters!



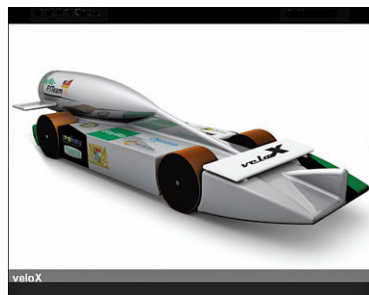
Unitus Racing team members on stage at the Singapore Conrad Centennial Hotel after winning the F1 In Schools World Championship trophy. Left to right: Yatrik Solanki, Tony Griffin, Mark Nanney, Brandon Miranda, Niemann Pest and Amanda Clark (with the 14 pound trophy!).



The American-German BayWa F1 team last summer in Munich. Left to right: Nicolas Beneš, Brandon Demers, Adrian Candussio, Maximilian Gawlik, Ahmad Hares, Stefan Matl, Daisuke Spielvogel, Jeremy Petty, and Markus Müller. Brandon, Ahmad, and Jeremy are from Braden River High School in Manatee County.



Braden River High School technology teacher Richard Platt holds a hand-made gift from the German team: a combined U.S.-German banner.



The BayWa F1 team car.



Participation in TSA propelled these teams to the World Championships.

PARENT CORNER

- ✓ Discussion starter: We live in a technical world. Talk to your students about the technology they use every day in school. They might surprise you!
- ✓ Regardless of the technology skills in your family, you can make sure your child learns what they need to succeed by encouraging membership in the Technology Student Association. TSA is open to all students.
- ✓ "Congratulations to both teams who represented Manatee County in Singapore at the F1 in Schools competition. You all made us proud!" Doug Wagner, Director; Adult, Career and Technical Education, Manatee County Schools.

FCAT reading comprehension QUESTION

★ What powers the F1 in Schools racecars?

Answer: The pressure exerted from punctured CO₂ cartridges.



- www.richardplatt.net/training/dragster3d/index.html
- www.baywa-f1team.de
- <http://unitusracing.com>



EdVantage Strategic Objective #4: Actively engage in global outreach.



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Jill McGarry (941) 748-0411 ext. 7036, jmcgarry@bradenton.com, Julie Beacham-Hoole, Page Editor.