



SUMMER CAMPS: Hands-on Experience in Science, Technology, Engineering, & Mathematics

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As part of its outreach initiatives FLATE orchestrated and participated in a number of summer camps for middle school students. The primary focus was on STEM (science, technology, engineering and mathematics) education, and were part of an ongoing effort to teach students about technology and its application in modern manufacturing operations.

At Hillsborough Community College, FLATE hosted its own robotics camp. This week-long event, from July 14-18, was designed to stir students' interest in robotics. Participants included 15 students from Dowdell Middle Magnet School and five from other Hillsborough County schools.

During the camp, students reconfigured Lego® Mindstorms® robots, programmed them to operate utilizing light and sound sensors, and competed in daily challenges. The exercises required team work, accuracy and speed.

Students also toured the Center for Rehabilitation Engineering and Technology lab at the University of South Florida. Here, they test-rode a newly designed robotic wheel chair steered by body movements, and witnessed applications of

robotics technology in providing solutions for the physically handicapped. To view snapshots of the event visit http://fl-ate.org/robotic_camp_08/index.html



Designing a "light sensor" challenge course.

FLATE also took part in the Composite Materials Camp at Tallahassee Community College. This was another initiative designed to educate students about the use of technology in composites manufacturing.

During the two week-long event, 30 middle school students built skateboards made of composite materials and

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The Underwater ROV

At the robotics camp, students witnessed a live demonstration of an underwater ROV (remotely operated vehicles) and learned about its design and operations.

Matt Samide, a 6th grader said "I want one and I am going to try and build an underwater robot." He said he likes programming robots because of the challenges it involves.



Students operating the underwater ROV.

For pictures and videos visit www.fl-ate.org/robotic_camp_08/index.html



Team ready to start their robotics in the "maze" challenge.



Dr. Marilyn Barger
Executive Director

EVENTS CALENDAR

9/11: FLATE IAC meeting at Linvatec (Largo, FL).

9/18: Presentation to Hillsborough County Science Teachers at Florida Aquarium.

9/25-26: Engineering Technology Forum at Seminole Community College.

10/16-18: Florida Technology Education Association (Indian Rocks, FL).

10/17: Hillsborough County Science Teacher Conference.

10/25: Tempest n Tampa: First Robotics Competition (USF Sundome, Tampa FL).

10/29-31: NSF ATE P.I. Conference (Wash. D.C.)

Enrollment Data Surveys

Calling all high school, technical center, or community college educators to fill out this enrollment data survey:

http://madeinflorida.org/hs_ts_survey_2008.htm

Your input is vital to the successful future of manufacturing education in Florida!

From the Executive Director's Desk

There have not been many lazy days at FLATE this summer! In this issue you will read about our successful Lego® Robotics camp as well as other outreach activities for students and teachers alike.

In June, Eric and I attended the American Society for Engineering Education (ASEE) annual conference and exhibition in Pittsburg, PA. Through presentations and posters we told the story of the development of FLATE's Engineering Technology degree; the Toothpick Factory simulation for soft skills; and presented the Engineering Technology Forum as a vehicle for change.

The ASEE conference focused on engineering and engineering technology education at both two and four-year institutions in all disciplines of engineering, industry relationships and other disciplines that support engineering/engineering technology. It also served as an excellent forum to network with professionals working in manufacturing engineering and technology education. You can find a copy of the presentations at FLATE's web page (www.fl-ate.org/media/publications.html) as well as on ASEE conference proceedings page at www.asee.org.

I also attended the SAME-TEC national conference in July hosted by MATEC, which is another NSF ATE Resource Center. The conference focused on convergent technologies and was a great venue for a FLATE presentation on the Engineering Technology Degree. The presentations evoked significant

interest in the degree, and we will follow-up with several CTE educators in different states with more information.

FLATE also participated in the NSF ATE joint center exhibit – disseminating information about our initiatives in Florida. Last, but not least, we ran a well-received Toothpick Factory workshop with 20 educators from around the country. Closer to home, Eric Roe attended the Florida Association for Career and Technical Education conference (www.prolinkuptraining.com/facte/) in Ponte Verde, FL. Eric manned an information table on FLATE's "Made in Florida" outreach campaign, presented educational resources, and attended sessions on the state and national legislative agendas for career and technical education including Perkins IV accountability.

Eric also participated in the state's new Working Group for Manufacturing. This new initiative is responsible for creating an industry-driven 3-year plan for updating the state secondary curriculum frameworks. Additionally, Dave Gula and Jodi Sutton are both presenting in teacher pre-school professional development sessions this month.

These conferences, workshops, presentations and exhibits are instrumental in building a strong and supportive national network of partners and stakeholders. They also provide us with national and statewide information and resources to share and implement with our partners here in Florida.

In the Spotlight

Meet Allan Dyer: success behind HCC and FLATE's robotics camp. Dyer is a science teacher at Dowdell Middle Magnet School in Tampa, but is by no means your average middle school teacher. From building model robots to solar-powered cars he is involved in a wide spectrum of projects.

For the Robotics Camp, Dyer



Allan Dyer, Instructor
HCC/FLATE Robotics
Camp.

played an integral role in building and developing curriculum. He sifted through software, hand-picked age-appropriate materials, and was the leading force in developing lessons around the Lego® Mindstorms® Robotics program. He says summer camps are a great way to reach out to students, and middle school stu-

dents are the best audience for these

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COMING SOON!!**FLATE STORE**

Items include: The Toothpick Factory kits, Made In Florida posters, lapel pins, shirts and much more!

First Engineering Technology Specialist

St. Petersburg College (SPC) is among a pioneering group of colleges in Florida that has taken the lead in adopting the new Engineering Technology degree.

This past summer the school experienced a defining moment in awarding the first "Engineering Support Specialist Certificate" to Adam Palermo.

Palermo is a sophomore at SPC who completed the core requirements of the program this past summer with a perfect 4.0 GPA, and is poised to graduate in May 2009 with an A.S. (Associate of Science) degree in Engineering Technology.

The Engineering Support Specialist Certificate comprises of 18 credits and is part of the 60-credit hour Associate of Science degree in Engineering Technology. It prepares students for

entry-level positions in manufacturing with specializations in engineering design, manufacturing processes and production, quality and product testing.

Brad Jenkins, program director and instructor at SPC said "Palermo was a hardworking student. He is technically savvy, enjoys electronics/manufacturing and will be an excellent technician."

This certificate also aligns with the Manufacturing Skill Standards Council, Certified Production Technician Certification, and is an excellent pathway to acquire the knowledge and skills necessary in the high-tech manufacturing workforce.

For more information contact Brad Jenkins at 813.341.4378 or visit www.spcollege.edu/program/ENGTECH-CT

St. Petersburg College
SPC

FLATE'S WIKI

FLATE's has many resources that are made available online through our



"wiki" (previously available online via WebCT). Our resources range from quick and easy lesson plans to more complex projects for use in science, technology, engineering and math classes. FLATE's wiki also has activities and lessons that will enhance career and education planning as well as professional development.

For more information contact Jodi Sutton at curriculum@fl-ate.org.

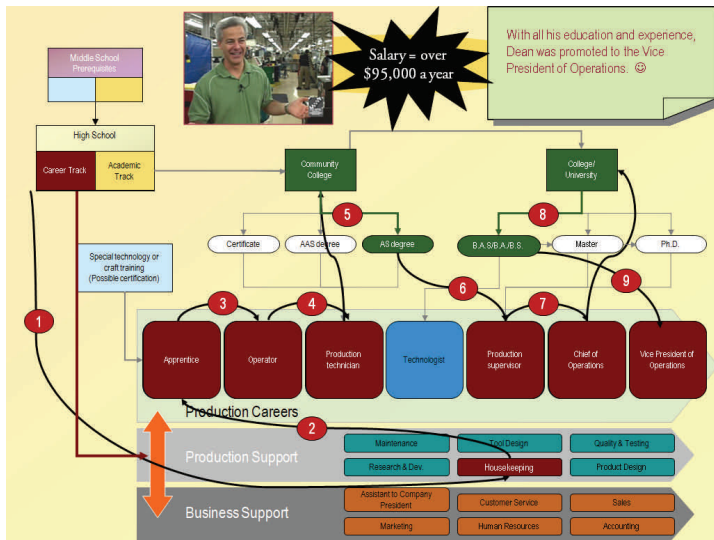
2008 Florida Manufacturers Week

As part of both House and Senate resolutions passed in the 2008 session, through the hard work of the Manufacturers Association of Florida (MAF), and in recognition of more than 16,000 manufacturers throughout Florida, the State of Florida has designated November 3-7 as "Florida Manufacturers Week." This week-long event is scheduled to coincide with MAF's annual manufacturers summit, and will focus on showcasing manufacturers from across the state.

Given FLATE's leading role in manufacturing/manufacturing education, it will be engaging in several promotional aspects of the event. Principally, FLATE proposes to produce a 30-second public service announcement to raise awareness and promote manufacturing in both local and statewide markets.

For more information visit http://madeinflorida.org/mfg_week.htm

The Interactive Career Pathways: Tracking Educational and Professional Pathways in Manufacturing



Manufacturing is a vast and diverse industry. People who work in the industry come from different educational and professional backgrounds.

The Made in Florida career pathways are interactive tools designed to provide students a look into how “real” people have succeeded in the world of manufacturing. These pathways provide an inside look into the educational and professional pathways of manufacturing professionals throughout Florida. They show students different paths people have taken and how they “made it” to where they are today!

One such pathway is that of Dean, the Vice President of a Florida manufacturing company. Dean built his credentials from the ground up. He started as a janitor and is now the vice president of operations for a major medical manufacturing company. Additionally, he earned his bachelor of science degree while working full-time and going to school part-time.

From a janitor to the vice president of operations, Dean carved his niche by pursuing his ambition to succeed. To view Dean’s and other career pathways visit <http://www.madeinflorida.org/Pathways2.htm>. Don’t miss your calling!

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exercises. He added, “The hands-on stuff, when they are building and programming is what gets kids excited.” To that effect, he encourages FLATE to reach out to more students by targeting schools on a county-by-county basis, or by contacting the schools’ subject area leaders, district level supervisors and career specialists.

Looking to the future, Dyer will be working with FLATE to offer several mini robotic training sessions throughout the school year, as well as additional camps next summer. Besides his involvement with the robotics camp, Dyer is engaged in miscellaneous projects at Dowdell Middle School. Through its rocketry unit he teaches students the basics of rocket science and how to construct/launch model rockets. Additionally, he teaches middle school students how to design and build solar-powered cars using photovoltaic cells. Closely related to this effort is his balloon-powered car project where students are introduced to the concepts of car engines, gear ratios, diameter of wheels and how these affect the speed of the car. Dyer is also involved in “Bay Grasses and Bay Classes”—an environmental-awareness program designed to educate students about the ecology of Tampa bay and help restore it.

Outside his involvement with educational and environmental projects, Dyer is a keen outdoor enthusiast. When not in school he spends time with his family hiking, camping, kayaking, canoeing and fly-fishing. He also likes all kinds of music and plays acoustic and bass guitar...a range of talents that makes him one of Florida’s outstanding science teachers!

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carbon fiber, and toured the composites lab at Florida State University. To make the connection with manufacturing, Dr. Eric Roe gave students an overview of modern manufacturing operations with the “Made in Florida” DVD and led a class exercise on educational and career opportunities the industry offers.

Yet another initiative along these lines was the Tech Stars Engineering for Youth Summer Camp at Manatee Community College. The camp aimed at educating middle school students about basic principles of mathematics, physics, manufacturing processes, automation and machines using conveyors, pulley systems and cranes. At the camp, David Gula, FLATE’s outreach manager, gave presentations about educational pathways and career opportunities in manufacturing. Students were also encouraged to take advantage of the resources available at www.madeinflorida.org.

REMINDER!
2008 FLATE AWARDS
 Nominations for the FLATE Awards are still open until August 31. To nominate your candidates online visit [ww.fl-ate.org/awards](http://www.fl-ate.org/awards). For more information contact Dr. Eric Roe (roe@fl-ate.org).



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