

TECHNOLOGY bits EDUCATION and bytes

National Research Center for CTE

What is the Math-in-CTE model?

“The Math-in-CTE model is a curriculum integration model designed to enhance mathematics that is embedded in career and technical education (CTE) content. It is a process that provides the opportunity for math and CTE teacher teams to work together in communities of practice and to identify where the mathematics naturally occurs in the CTE content. In the Math-in-CTE model, math concepts are not forced into or superimposed on the CTE curriculum.”

2008-09 Technology Ed. Teams:

Vivian Rodriguez (TE) and Maria Renaud (Math), West Miami M.S.; William Smith (TE) and Monica Sanz (Math), W.R. Thomas M.S.; Connie Sheffield (TE) and Infanta Shirley (Math), Allapattah M.S. A special thank you to Jose Arias (TE) Felix Varela Sr. for his help this summer.

2007-08 Technology Ed. Teams:

Jerome Siegmeister (TE) and Jose Arias (Math), Barbara Goleman Senior; Carmen Garcia (TE) and Alejandro Carrasco (Math), Miami Killian Senior; Jose Larrinaga (TE) and Juan Gonzalez (Math), Hialeah Senior; Ron Torres-Gatherer (TE) and Carlos Fukunaga (Math), Robert Morgan Ed. Ctr.; Melissa Fernandez (TE) and Lisette Gonzalez (Math), MAST Academy; Veronica Garcia (TE) and Oscar Fernandez (Math), Coral Gables Senior; Lazaro Del Rio (TE), Juan Martinez (TE) and Bert Gonzalez (Math), Coral Reef Senior. A special thank you to the Technology Ed. teachers who tested the Control Groups: Mike Cole, Barbara Goleman Senior; Paul Kynerd, Miami Lakes Ed. Ctr.; Mona Pamajala, Sunset Senior and Mary Williams-Ervin, Felix Varela Senior.

Applying the Math-in-CTE Model

Building a Learning Community

Last school year, Engineering Technology and Drafting/Illustrative Technology teachers participated with their math partners in the Math-in-CTE study. This year middle school Technology Education teachers were involved for the first time. The teams met this summer at Braddock Senior High for a week collaborating on enhancing the math within

Technology Education lessons of reading rulers, applying measurement to drafting and graphic design projects and even a lesson on the Safir Hurricane Scale.

Highlights of the workshop included Ponce de Leon TE teacher, Jerry Backman demonstrating a lesson by testing the wind resistance of a model house with a leaf blower.

The Math-in-CTE model includes pre-testing students with a standardized grade level math test, TE teachers meeting with math teachers before teaching the lessons developed during the summer workshop, technology ed teacher giving the lessons, debriefing after each lesson is taught, critiquing and refining the lessons with the Math-in-CTE teams and finally administering a post test to students after the lessons are presented.

Last year a control group of students was also tested.

The math teachers coach the TE teachers in the appropriate math vocabulary, math benchmarks and the teaching methods that students are familiar with from their math instructors. Two of the objectives of the math study is to help students master the

real-world application of math principles and to also enhance student performance on standardized math tests.

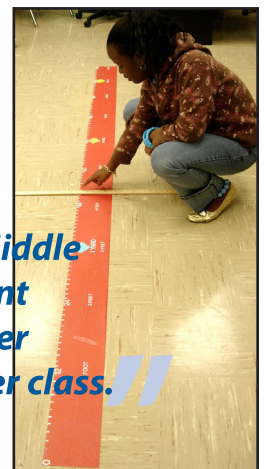
Connie Sheffield, TE teacher at Allapattah Middle School took the photograph below of one of her students involved in a measurement activity.

Last year's study was

very successful and this year's learning community of teachers are right on track for a great year, too.



Allapattah Middle School student reading a ruler created by her class.



Certified Success

FTEA 79th Annual Conference



Thirty TE teachers are heading to the 79th Annual Florida Technology Education Association Conference, October 15-18, 2008 in Indian Rocks Beach, Florida. They will be attending workshops on industry certifications, manufacturing technology, robotics, Solidworks, Autodesk and Adobe software training, and participate in a best practices fair. Last year, TE teachers



Vaden Scott operating a lathe at last year's FTEA conference.

Vaden Scott, of Miami Carol City M.S. and James Thompson, of Hialeah Senior High presented a workshop on making wooden ballpoint pens using wood lathe technology. This year, Paul Kynerd, of Miami Lakes Educational Center, will be the keynote speaker and William Baltazar, of Miami Coral Park Senior High, will conduct a hands-on workshop using Vex Robotics for Holmquist Educational Consultants. Tom Cummings, M-DCPS Instructional Supervisor

of Technology Education will be participating in the FTEA board meeting as the ITEA Representative board member.



James Thompson, 2007 conference workshop presenter.

The Florida Technology Education Association is an organization devoted to promoting the development and advancement of technology education in the State of Florida. Comprised of technology educators from across the state, FTEA members are committed to bringing the best possible education to over 185,000 technology students in Florida. For more information, go to www.ftea.com.



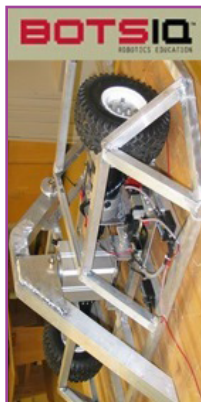
Paul Kynerd will be keynote speaker at the 2008 FTEA conference.

M-DCPS Technology Education teachers are leaders in the State of Florida.

Engineering Technology

M-DCPS Robotics Goes International

William Baltazar, engineering teacher at Miami Coral Park Senior High was invited by the University of Bogotá Jorge Tadeo Lozano, to give a conference presentation on BotsIQ Robotics.



The university is planning to start a Robotics program which will be the premiere Robotics university level program in the country of Colombia. Over 1000 students and professors from Colombia attended this conference on September 4, 5 & 6 in the city of Bogotá. Mr. Baltazar, as a keynote speaker

presented an overview of the Miami-Dade County Schools Robotics program. Mr. Baltazar also had the opportunity to interact with various university presidents and faculty on a round table discussion.



The University of Bogotá Jorge Tadeo Lozano is planning to participate in the Bots-IQ competition this year at the Miami-Beach Convention Center. The students from Miami Coral Park Senior High will mentor the University of Bogotá students in the construction of their robot.

"I am privileged to be able to participate in this international endeavor, and I would like to thank Miami Coral Park principal Dr. Nicholas JacAngelo for his support of the CPHS Robotics program and Mr. Tom Cummings for his support and for providing the tools for this program," Mr. Baltazar stated after his trip to Bogotá. Technology Education would like to applaud Mr. Baltazar's commitment to the field of robotics and to his students. We congratulate him on the honor of this invitation to work within an international community of educators and students.



Workshop Announcement

Professional Development Day, Nov. 4th

Want to know what all the buzz is about with industry certifications? County and state fair projects? TSA? Career Academies? Where to find great lessons, projects or supplies?

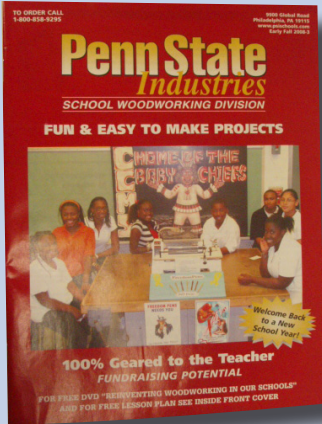
We'll answer these questions and much more on November 4, 2008. Technology Education will hold a professional development on November 4, 2008 at Hialeah Senior High School, 8:30am - 1:00pm. This is a district teacher work day set aside for professional development, (not a teacher opt day.)

Presentations will be made regarding Miami-Dade County

Fair projects, Industry Certifications, Recognition of Teacher Achievements, Technology Student Association, Freedom Pen Project, sharing of best practices, textbooks and much more. Register now online on the M-DCPS professional development website, <http://calendar.dadeschools.net/cal/calendar.nsf>. Find a session by department, click on instructional and go to Career and Technical Education, name of the class is Technology Education: Instructional Strategies.

Hope to see you there.

Congratulations to Miami Carol City Middle School Students



Exploration of Production Technology students and teacher Vaden Scott of Miami Carol City Middle School were honored recently when Penn State Industries used their class photograph on the front cover of its Fall 2008 School Woodworking Division Catalog. The class was chosen because of their commitment to the "Freedom Pen Project," which is a

project created by the Saw Mill Creek Woodworker's forum to provide hand made pens for our military serving overseas.

The Carol City students produced 113 ballpoint pens. Technology Education applauds these young people for their dedication to our servicemen and women. Keep up the good work.

For more information, directions, and lesson plans for the Freedom Pens, go to: www.psischools.com, or find out more at the November 4th professional development.



TSA Leadership Conference

Approximately 5 Technology Education students and their advisors will attend the TSA Leadership Conference at the

Sun Regal Resort, Lake Buena Vista, Florida, November 12-15, 2008. Highlights of last year's conference included a scavenger hunt through the Disney Marketplace which is across the street from the conference hotel. Students will participate in teamwork activities, demonstrations and practices of state competitions, officer training, etc. Two new TSA advisors will also be attending the New Advisor Training at the conference.

For more information, go to www.floridatsa.com or call Pamela Lopez at 305-995-7301.

National TSA New Website

Recently, TSA has gone through one of the biggest image makeovers with a new redesigned professional Web site.

The site has many features and links to interest all students, so check it out at www.tsaweb.org.

Veteran Teachers Retire

Gary Brantley, Technology Education teacher retired last June after teaching 38 years at Homestead Middle School, which is also a school he attended. Gary graduated from Eastern Kentucky University with a Bachelor of Science in Industrial Education and earned a Masters Degree



in Vocational Education from Florida International University.

Other teachers retiring include Jerry Backman, Ponce de Leon Middle; Dave Freundlich, Cutler Ridge Middle; Leroy Berry, Holmes Braddock Senior and Gerald Krotenberg, Killian Senior High. We wish all of our retirees well and are appreciative of a job well done by all.

IMPORTANT TSA DATES

November 12-15, 2008 Leadership Conf. & New Advisor Training

April 29 - May 2, 2009 State FL-TSA Conference & Competitions

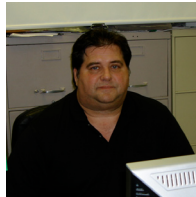
June 28 - July 2, 2009 31st Annual National TSA Conference

Career and Post-Secondary News

M-DCPS and the Art Institute of Fort Lauderdale have reached an articulation agreement which awards 3 college credits to TE students when they complete 3 high school credits of Drafting/Illustrative Design Technology. For more information, go to <https://www.aifl.info/collegetcredit/U>.

Teacher Achievements

✔ Congratulations to Frank Houghtaling, Miami Central Senior High School for achieving an industry certification of the Mastercam Certification Level of CPgmPro “Certified Program Professional.” Frank is our first teacher earning an industry certification.



✔ Kudos to Jerome Cole for earning two awards in 2007-08. He was awarded the International Technology Education Association (ITEA) Teacher Excellence Award in March 2008 at the ITEA Conference in Salt Lake City and the Technology Educators’ Honor Society Epsilon Pi Tau Award of Exemplary Program of the Year.



✔ Jeff Lintz was recognized by the Technology Student Association for his Outstanding Service to Students With Disabilities at the Florida TSA State Conference in Orlando, in April 2008.

Programs of Study

Trends & News

Aerospace Technologies

A workshop entitled “Using Aerospace Projects in Science, Math and Technology Education Curriculum” is planned for February 6, 2008 at Baker Aviation.

Communications Technology

Watch for upcoming training for Adobe Associate in Photoshop Industry Certification curriculum. Stay tuned for details.

Drafting/Illustrative Design Technology.

Articulation agreement meetings begin this Fall between M-DCPS and Miami-Dade College.

Engineering Technology

Training dates will be forthcoming for workshops focusing on industry certification assessment.

Project Lead the Way NAF Academies are planned for three M-DCPS schools, Miami Sunset Senior High, Hialeah-Gardens Senior High and North Miami Senior High. These schools have recently attended and hosted Year of Planning reviews with the NAF staff. Mona Pamajala, Sunset Senior, and Dr. Cynthia Wu, Hialeah Gardens Senior will be attending PLTW training in Atlanta, GA and Santa Fe, New Mexico.



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