



## **COE and SRI Collaborate to Improve Middle School Math**

**(St. Petersburg, Fla.) August 11, 2009** – As part of a collaborative grant, USF St. Petersburg College of Education professors and the educational division of SRI International will guide 15 Pinellas County middle school math teachers as they learn, redesign and implement the use of a research-based digital math education program. The first of a series of trainings for the SunBay Digital Mathematics project ran Aug. 11-13 at USFSP.

Project partners include the USFSP College of Education, SRI International, Pinellas County Schools, the Helios Foundation and the Pinellas Education Foundation; this unique collaborative gives Pinellas schools the capacity to integrate a digital math curriculum and teacher professional development into a coherent and effective approach to algebra and geometry instruction.

The grant's ultimate goal is to increase student achievement in grades 6-8 in algebra and geometry, the major math topics of Florida's Next Generation Sunshine Standards. USF St. Petersburg will be primarily responsible for teacher involvement with the project, including teacher professional development, engaging teachers in co-designing math units and supporting teachers in their use of SimCalc, SRI's digital math curriculum. In the first year of collaboration, the teachers will pilot test the use of SimCalc and Geometer's sketchpad materials, as well as associated in-service professional development. Vivian Fueyo, dean of the College of Education, serves as the Principal Investigator on the USFSP portion of the project.

"This responds directly to the college's emphasis in strengthening pre-service and in-service programs in STEM fields," Fueyo said. "Given our strong partnership with the district, the opportunity to combine SRI's innovative digital math curriculum and the college's expertise in math education created the ideal combination for achieving our shared goal of sustainable change."

With information gathered during the first year of collaboration, the partners will design a five-year initiative focused on increasing middle school learning in algebra and geometry, creating a model teacher preparation program for middle school mathematics at USFSP, increasing teacher retention and increasing student retention in middle school mathematics. If funding is secured for future years, the project will be expanded to include more teachers and students. Long-term goals of the SunBay project include demonstrating positive outcomes in students' mathematics achievement, including their interest in continuing to take challenging mathematics courses.

"This initiative will serve as a catalyst in redefining math education for our students," said Pinellas County Schools' Superintendent Julie Janssen. "We believe this exciting and interactive approach will better engage students and build their capacity to be effective problem solvers."

For more than 10 years, USFSP has partnered with the Pinellas County Schools in a successful masters degree program with concentrations in math and science, and USFSP has trained the majority of elementary math supervisors in the school district.

USFSP professors serve as mentors to Pinellas County professionals and publish extensively on best practices in teacher education and math and science teaching. They also participated in the development of the Next Generation Sunshine State Standards, the standards for the National Council of Teachers of Mathematics, and the standards for the National Science Teachers Association.

The pilot project builds on SRI's decade of National Science Foundation-funded work developing curriculum that has been rigorously evaluated to show substantial gains in students' mathematics learning. Earlier SRI research has demonstrated success in educational programs that combine innovative mathematics curriculum with dynamic mathematics technology and teacher training.

“Research has shown that middle school students are likely to disengage from the subject of math at the time that mathematics has the most potential to lead them towards a rewarding career in science, technology, or engineering – fields that are critical in today's innovation economy,” said Phil Vahey, senior research scientist in SRI's Center for Technology in Learning. “SRI will lead the effort to revise digital mathematics materials that have been shown to be successful in prior work, and evaluate whether they meet Florida's needs.”

### **Project Overview**

Fifteen seventh grade teachers in seven Pinellas County middle schools will attend workshops and monthly meetings focused on using technology-based curriculum units to teach advanced mathematics concepts aligned with the mathematics components of Florida's Next Generation Sunshine State Standards.

The teachers will implement two technology-based curriculum units on advanced math concepts, and have the opportunity to provide input on how the materials can be refined to meet the County's needs. One unit will focus on students' understanding of rate and proportionality in ways that are important to later mathematics and to science and engineering studies. The second unit will focus on core geometry topics. These units will also incorporate important skills such as critical thinking, problem-solving, collaboration and communication. Throughout, the project research team will support teachers' use of the materials and also gather data on the effectiveness of the materials and technology.

The team will also conduct meetings with key stakeholders in Pinellas County to develop a comprehensive strategic plan with recommendations on expanding the pilot in Pinellas County schools.

### **-USF St. Petersburg-**

#### **About University of South Florida St. Petersburg**

Established in 1965, the University of South Florida St. Petersburg is a fiscally autonomous institution of the University of South Florida. USF St. Petersburg is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award degrees at the baccalaureate and master's levels. With a commitment to excellence in research and teaching, USF St. Petersburg values faculty-student research collaboration, interdisciplinary perspectives, university-community partnerships and a student-centered environment.

The College of Education at USF St. Petersburg, which is a candidate for national accreditation by the National Council for the Accreditation of Teacher Education, offers graduate and undergraduate degree programs recognized by the Florida Department of Education for accomplishing defined learning outcomes, supported by a foundation of applied research, and committed to meeting the needs of the community and the candidates it serves. In pursuit of this mission, faculty in the College of Education are guided by a respect for evidence, creating and extending knowledge by supporting research, and by the pursuit of scholarship. The College of Education seeks to prepare exemplary teachers and other educational personnel for roles in a diverse and changing society. It promotes life-long learning, is committed to stewardship that reflects the ethics of community responsibility, and continually strives to meet the educational needs of all learners.

### **About Helios Education Foundation**

Helios Education Foundation is the largest philanthropic organization serving Arizona and Florida focused solely on education. The Foundation is dedicated to enriching the lives of individuals in Arizona and Florida by creating opportunities for success in postsecondary education and its community investments are made across three impact areas: Early Childhood Education, the Transition Years (grades 5-12) and Postsecondary Education. Since inception in 2004, Helios Education Foundation has invested over \$62 million into education-related programs and initiatives in both states. For more information, visit the Foundation online at [www.helios.org](http://www.helios.org).

### **About Pinellas County Schools**

Pinellas County Schools, an award-winning school district, has been recognized on the national and state levels for its strong efforts and dedication of its students, teachers and staff. The district is located on Florida's west coast and is the seventh-largest school district in the state and 25<sup>th</sup> largest in the U.S. with a projected K-12 student enrollment of approximately 102,550. Pinellas County Schools is the largest employer in the county with more than 17,000 teachers, administrators and support staff. The district works collaboratively with parents, business leaders and the community to reach the goal of 100% student success and prepares students for success in college or careers.

### **About Pinellas Education Foundation**

The Pinellas Education Foundation is a coalition of business and community leaders who work together to improve the quality of public education. They do this by advocating for public education reform, creating programs to improve student and teacher performance, and raising funds for scholarships, grants and teacher recognition. Some of the most successful Foundation programs are the Doorways Scholarship Program, Enterprise Village and Finance Park, Teach for Excellence Classroom Grants, and the Frances Stavros Career Education Scholarships.

### **About SRI International**

Silicon Valley-based SRI International is one of the world's leading independent, nonprofit research and technology development organizations. Perhaps best known for its invention of the computer mouse and interactive computing, SRI has also been responsible for major advances in networking and communications, robotics, drug discovery and development, advanced materials, atmospheric research, education research, economic development, national security, and more. The nonprofit institute performs sponsored research and development for government agencies, businesses, and foundations. SRI also licenses its technologies, forms strategic alliances, and creates spin-off companies.

SRI's Center for Technology in Learning is focused on improving teaching and learning by conducting research in the innovative design, use and assessment of interactive learning environments. Within the Center, a Strategic Learning Consulting practice helps educational technology firms improve their products by providing research insights and strengthening educational designs.