

Executive Summary
Science Understanding, Math Mentoring
Integrated with Technology
(SUMMIT) Agreement with University of Central Florida

REQUESTED ACTION: The purpose of this item is to approve the Agreement between the University of Central Florida (UCF) and The School Board of Broward County, Florida. This agreement will award \$155,062.00, payable to The School Board of Broward County, Florida, from the Florida Department of Education's Mathematics & Science Partnership, which is implemented through the University of Central Florida. The Period of Performance for this Agreement is from October 16, 2012 to May 31, 2013.

Summary of SUMMIT Elementary School Program: The grant, entitled Science Understanding, Math Mentoring Integrated with Technology (SUMMIT) is the second phase of professional learning offered to District teachers by Dr. Larry Chew, University of Central Florida (UCF), Department of Mechanical, Material and Aerospace Engineering through The Inquiry Institute. This phase will allow the District to have elementary school teachers participate in workshops to be prepared for the Next Generation Sunshine State Standards (NGSSS).

Similar to the Spring 2012 program for middle school teachers, this series of workshops addresses inquiry-based instruction in the elementary school. The workshops assist teachers in understanding and unwrapping current NGSSS, present ways of teaching science using the inquiry method, apply the Common Core State Standards (CCSS) in literacy and mathematics, and incorporate lesson study and lesson development strategies.

Funds will be used to train 80 elementary grades three (3) through five (5) teachers, purchase 80 training kits, provide substitute coverage or stipends for teachers to attend training, and substitute coverage or stipends for lesson study implementation. The full professional learning package involves (5) days of intensive study and application, followed by two (2) days of lesson study within a Professional Learning Community (PLC), and culminates with classroom application of strategies learned and peer feedback. The unique aspect of this program is the time allocated for teachers to implement, reflect and peer-evaluate high level questioning techniques and other strategies acquired through participation in these workshops and collaborative activities.

The major outcome of the professional learning is to assist teachers to increase their use of higher-order questioning skills required to facilitate STEM inquiry-based, hands-on authentic learning experiences for their students. The district expects these workshops to be especially effective in providing strategies for elementary school teachers to implement integrated CCSS-STEM lessons with their students.

Preliminary data and testimonials from SUMMIT Agreement that supported Middle School Teachers (April-May, 2012)

The professional learning provided to the middle school teachers who participated in the SUMMIT program included a methodology to collect actual work products and feedback on the effectiveness of the activities. The work products were inquiry-based lesson plans that were collaboratively developed, tested and modeled in classrooms, revised in a continuous improvement cycle and then posted to the Florida Department of Education (FLDOE CPALMS) curriculum resource bank and also to the SUMMIT program website (<http://summit.cecs.ucf.edu>). This professional learning lesson study model is a research-based best practice supported by our District, the FLDOE and on a national level. Broward teachers produced approximately 200 high-quality, inquiry-based lessons, which are now available through BEEP and CPALMS.

Initially, teachers provided testimonials on the SUMMIT web site. The feedback is very positive in terms of their ability to incorporate the professional learning into daily classroom practice, which was the major purpose of the grant. Here are a few excerpts submitted:

"The SUMMIT training was very enlightening. Dr. Chew demonstrated how easy it is to get our kids to start thinking again. I am very excited about using his approach in my classroom. I want my students to explore and get the idea that learning is up to them. I also liked that he reinforced the need to use the benchmarks when developing science lessons. Thank you so much, Dr. Chew, your enthusiasm is contagious!" *Pamela Vandercook, Broward*

"The SUMMIT was great! I learned how to better prepare my lesson plans, lesson plans that will be effective. I learned how to "actively" engage my students in the lesson and guide them through understanding the content of the lesson. My students will be better prepared for the FCAT or any test because they will be able to write a content statement and dissect key words and the lesson. Dr. Chew was one of the best presenters I have ever encountered. He captivated his audience and we all left the workshop positively charged and motivated to try this method of teaching. My students, my science department and me will benefit from what I have learned from Dr. Chew. As I mentioned, after each lesson my students will walk away knowing the content and being able to explain what they learned. Thank you to everyone for making this happen." *Latonya Dixon, Broward County*

"Dr. Chew's workshop on Science Inquiry Lessons was phenomenal! Among other wonderful things, I learned how to develop a lesson around a topical picture of science. It was the most useful workshop I have attended in years!" *Barry Mock, Broward County*

I learned how important it is that the lessons I use in my classroom should be thought provoking for students. I now understand the importance of using a content statement as a driving force for my lesson planning. It was interesting to experience inquiry myself, and I now have a better understanding of how much my students will benefit from the process of figuring out the steps and connections by themselves. I will now be able to work my classroom as if I am the coach in the room, instead of a message deliverer. *Billie Dollins, Broward County*

Dr. Chew is such a motivating and positive force, who made me believe in inquiry teaching. I am very good at my content and also of course in getting my students to understand the concepts that they need to learn. I accomplish it using different strategies. But there were a few things that I haven't used in my class before, though I am aware of them. When Dr. Chew modeled it for us and made us use it during the training, it was an "aha" moment for me. As mentioned before, I knew the strategies that were being used in the training, but I didn't want to use a few of them as I believed I can teach and make students understand the concepts. When I myself used these in the group I was working with, I realized that we were so happy and excited to use these strategies. And so from now onwards, I will be using these in my classes. *Rajinder Vasamsetti, Broward County*