

## East Central School Psychologists attend FLDOE and MTSSS Summer Math Institute

The Florida Problem Solving/Response to Intervention Project and the Department of Education co-hosted the Summer Math Institute at Altamonte Springs on July 7<sup>th</sup> and 8<sup>th</sup>. East Central Region School psychologists attended the event along with districts teachers and administrators to learn how to enhance student engagement in mathematics as part of a Multi-Tiered System of Student Supports. The primary goals of the institute were:

- to present a coordinated approach to improving students learning to meet rigorous math standards
- to align current professional development and evidence-based instructional practices to ensure continuous improvements in teaching and learning.

The audience learned how the Next Generation Sunshine State Standards (NGSSS) and the Common Core Standards (CS) will be addressed with rigor and depth through Backwards Planning, Higher Order Thinking Skills, and Formative Assessment Tasks. Two key processes emphasized were Data-Based Decision Making and maximizing Student Engagement. Data Based Decision Making activities were used to teach the audience how to intensify instruction based on students needs as part of a Multi-Tiered System of Student Supports. They demonstrated the alignment of research-based practices when intensifying math instruction. Throughout the sessions, the presenters indicated the need to use relevant real-world applications that promote active student engagement to ensure positive outcomes. Research-based practices highlighted include Standards-based Instruction, Lesson Study Cycle, Higher Order Questioning, Depth of Knowledge Levels of Instruction, and the Problem Solving Process.

By the end of the institute, participants left with improved awareness of research-based practices in mathematics, an understanding of their role within the multi-tiered systems of student supports, and practical resources to promote student engagement and data-based instructional decision making. The resources and tools showcased will assist the participants in planning and delivering cognitively complex and relevant math instruction with direct application of mathematical principles to everyday life situations. Take a few minutes to check these great resources for math instruction:

Research-based Policies and Practices:

<http://www.fl DOE.org>

<http://ies.ed.gov/ncee/wwc/publications/practiceguides>

<http://www.bestevidence.org>

State of Math Education:

<http://www.fl DOE.org/arra/racetothetop.asp>

<http://www.corestandards.org>

Standards based Instruction:

<http://www.am.dodea.edu/ddessasc/aboutddess/standards/standardsbased.html>

[http://www.glencoe.com/sec/teachingtoday/subject/standards\\_math.phtml](http://www.glencoe.com/sec/teachingtoday/subject/standards_math.phtml)

<http://www.englishcompanion.com/pdfDocs/teaching2standards.pdf>

## Math Resources:

<http://www.fcatexplorer.com>

<http://www.floridastandards.org/homepage/index.aspx>

<http://fcat.fldoe.org/eoc>

<http://fcat.fldoe.org/fcat2/fcatiitem.asp>

<http://www.centeroninstruction.org/topic.cfm?k=M>

<http://www.nctm.org/resources/default.aspx?id=230>

<http://www.leadered.com/rrMath.html>

<http://www.mathgoodies.com/articles/manipulatives.html>

## Lesson Study Cycle:

<http://www.ets.org/flicc/pdf/Nov4LessonStudyPacketOne.pdf>

[http://www.flbsi.org/pdf/Lesson%20Study%20TAG\\_Final.pdf](http://www.flbsi.org/pdf/Lesson%20Study%20TAG_Final.pdf)

## Depth of Knowledge:

<http://jc-schools.net/dynamic/math/webbs-depth.pdf>

[http://www.pdesas.org/main/fileview/Instruction\\_Depth\\_of\\_Knowledge.pdf](http://www.pdesas.org/main/fileview/Instruction_Depth_of_Knowledge.pdf)

<http://www.facstaff.wcer.wisc.edu>

## Higher Order Questions and Thinking Skills:

<http://www.med.wright.edu/sites/default/files/aa/facdev/Files/PDFfiles/QuestionTemplates.pdf>

<http://teaching.uncc.edu/files/file/InstructionalMethods/HigherOrderActivities.pdf>

<http://eduscapes.com/tap/topic69.htm>

<https://georgiastandards.org/Frameworks/GSO%20Frameworks%20Support%20Docs/Math%20Questioning%20Ideas%20for%20the%20Classroom.pdf>

## Problem Solving Process, Data Based Decision Making, and Multi-Tiered System of Student Supports:

<http://floridarti.usf.edu>

<http://www.fldoe.org/Schools/rti-training.asp>

<http://www.florida-rti.org>

Formative Assessment:

<http://www.iu5instructionalcoaches.wikispaces.com/search/view/formative>

<http://www.floridastandards.org/resource/mfas.aspx>

Student Engagement:

<http://www.nea.org/tools/16708.htm>

[http://www.centerforcsri.org/index.php?option=com\\_content&task=view&id=446&Itemid=5](http://www.centerforcsri.org/index.php?option=com_content&task=view&id=446&Itemid=5)

<http://www.cat.ilstu.edu>

<http://www.edutopia.org/project-learning-teaching-strategies>

[http://nsse.iub.edu/NSSE\\_2010\\_Results/pdf/NSSE\\_2010\\_AnnualResults.pdf#page=11](http://nsse.iub.edu/NSSE_2010_Results/pdf/NSSE_2010_AnnualResults.pdf#page=11)

<http://www.leadered.com/studentEngageWorkshop.html>

Technology Classroom Applications:

<http://illuminations.nctm.org>

<http://nlvm.usu.edu/en/nav/vlibrary.html>

<http://www.ed.gov/sites/default/files/netp2010.pdf>

<http://www.educause.edu/educatingthenetgen>

[http://www.cte.usf.edu/bibs/active\\_learn/math/bib\\_math.html](http://www.cte.usf.edu/bibs/active_learn/math/bib_math.html)

<http://www.udlcenter.org>

<http://www.techlearning.com/article/37742>

Grants for Technology in Education:

<http://technologygrantnews.com/grant-index-by-type/educational-technology-grants.html>