High School level Institute **Tim Husband**

- *SMART Boards - Basic Uses to Advanced Tools*

  This institute will focus on the teaching of mathematics using the SMART Notebook software for SMART Board interactive whiteboards. Participants will see, use, modify, and create "Smart" lessons and activities for their classrooms. We will use a variety of educational software that integrates will with the SMART Notebook software including TI-SmartView and Nspire computer software. Finally, participants will explore the new SMART Notebook Math Tools software. This is an add-on to SMART Notebook software. SMART Notebook Math Tools combines many tools you use to teach math in a single application. The software can now solve and graph expressions with full support of fractions and exponents. There is an improved shapes and shape manipulation for geometry and teaching fractions.

Middle School / Junior High Level Institute **Marian Prince**

- *Learning the TI nSpire and Navigator tools*

  This is an Institute for teachers who want to learn TI-Nspire from the beginning and demonstrating the enhancement available with using the Nspire Navigator. Considering the current school budget situation, more teachers might be asking their districts to get TI-Nspires first before asking for the Nspire Navigator. But participants in the Institute would see how the Navigator enhances their teaching so that they would want to include the Navigator in their classroom instruction.

Elementary K-5 Level Institute **Judy Wheeler**

- *Building Imagery in the Mind's Eye – the Missing Link in the Concrete-Pictorial-Symbolic Sequence*

  Children are natural visual learners. Long before they can read, they are able to assimilate visual information with ease. Early mathematics instruction can capitalize on this natural intelligence. Understanding abstract math concepts is reliant on the ability to "see" how they work. One main difference between people who are good at math and others who "don't get it" is the ability to use the mind's eye.

  Visual instruction is about crafting representations so that students readily understand them, and consistently use the same models to mean the same thing across varied topics throughout the grade levels. Building imagery in the mind's eye is about internalizing these visualizations. These mental images of mathematical ideas make abstract concepts more concrete and keep them readily available for reflection. The issue of making sequences and connections among modalities - concrete, pictorial, mental imagery and symbolic - must be given careful and deliberate attention.

  In this institute, participants will learn effective ways to use concrete manipulatives and tools to build visualizations in the mind's eye. These approaches involve visualization, color cues, picture metaphors, concept maps, sketches, diagrams, and graphic symbols.

Administrative Level Institute **Ruth Anne Hodges and Dan LaDue**
Wednesday morning only

- *A Discussion on Michigan's adoption of the Common Core State Standards (CCSS)*

  On June 16, 2010 Michigan adopted the Common Core State Standards (CCSS) a set of rigorous, college and career-ready K-12 curriculum standards that states across the nation are considering adopting to bring consistency in education across the states. , Ruth Anne Hodges and Dan LaDue from the Michigan Department of Education (MDE) will be discussing the CCSS and how they align with the GLCE's and HSCE's. They will also discuss MDE's plans to assist teachers and students to transition to the new standards.

  The Common Core State Standards Initiative (CCSSI) is a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) involving the Governors and state commissioners of education from 48 states, two territories and the District of Columbia, committed to developing a common core of state standards in English Language Arts and mathematics for grades K-12 .

  "Michigan has been a national leader in the development of rigorous academic standards," said Mike Flanagan, State Superintendent of Public Instruction. "The adoption of these standards will for the first time provide states with clear and consistent educational goals and represent a logical next step in our state's efforts to embrace high learning."

  The standards have been guided by the best available evidence and the highest standards across the country and globe and were designed by a diverse group of teachers, experts, parents, and school administrators, so they reflect both real world requirements and the realities of the classroom.

  "The Common Core Standards are built on the best state standards," Flanagan said. "These standards provide the content; they aren't telling states or school districts how to teach these content standards."

  The Common Core State Standards define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs. The standards:

  - Are aligned with college and work expectations.
  - Are clear, understandable and consistent.
  - Include rigorous content and application of knowledge through higher order skills.
  - Build upon strengths and lessons of current state standards.
  - Are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society.
  - Are evidence-based.

Michigan implemented new nationally recognized K-8 grade level content expectations in 2004 and high school content expectations in 2006 for English Language Arts and mathematics. Both are closely aligned to the Common Core State Standards which will minimize instructional changes and adjustments.

The Common Core State Standards will enable participating states to:

- Articulate to parents, teachers, and the general public expectations for students.
- Align textbooks, digital media and curricula to the internationally benchmarked standards.
- Ensure professional development for educators is based on identified need and best practices.
- Develop and implement an assessment system to measure student performance against the common core state standards.
- Evaluate policy changes needed to help students and educators meet the common core state college and career readiness standards.