

Schedule for Elementary Mathematics Teacher Leadership Academy

Elementary Mathematics Teacher Leadership Academy, Year 1

June 16–19, 2008,
Chatham University

Cost per person for each academy:

At Chatham & AIU:
\$1200 (includes materials)*

Contact IU 1, 7, or 27 for
dates and fees.

Districts outside of IU 1, 3, 7, or 27:
\$1500 (includes materials)*

*Math Science Partnership (MSP)
Districts will be fully subsidized.
District scholarships are available.

*Dates of school year sessions
will be announced.*

To access the on-line registration form:

- Go to <http://www.aiu3.net/msc>.
- Click on publications.
- Click on *Coordi-net*, spring/summer 2008.
- Click on Elementary Math TLA year 1 registration form.

The **Elementary Mathematics Teacher Leadership Academy** offers a multi-year sequence. Each of the first two years consists of eight days of professional development. The third year consists of seven professional development days, focused on lesson study.

Act 48 credits can be earned and 3 graduate credits are available each year at personal cost. Graduate credits will require registration at the MSP partner institution of higher education.



For further information, contact::

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Elementary Mathematics Teacher Leadership Academy

2008-2009

*Building Professional Learning
Communities To
Strengthen Student
Understanding of the
“Big Ideas” of
Mathematics*

Math & Science Collaborative



Elementary Mathematics Teacher Leadership Academies

The base-ten number system and the relationships among the four operations are crucial big ideas in K-5 mathematics. Participants will be prepared to lead 24 hours of professional learning in their districts. To develop understanding of the teacher's role as facilitator of learning of these big ideas, educators will examine:

- K-5 mathematics tasks
- student work
- instructional episodes

Participants will explore children's thinking to learn how they develop these major ideas of mathematics by:

- engaging in mental math
- discussing videotapes of mathematics classrooms
- reviewing related research
- analyzing student interviews
- assessing student work.

Learning Outcomes for the Academy and In-district professional learning

Participants will:

- Understand how to organize instruction around the "big ideas" of mathematics.
- Understand how the cognitive demand of a mathematical task affects student learning.
- Develop questioning strategies and other instructional moves to probe students' understanding of a concept.
- Understand what student work looks like when they demonstrate understanding of mathematics.
- Deepen the understanding of the teacher's role as facilitator of learning.

Featured Resources

- *Developing Mathematical Ideas*, designed by Educational Development Center, is a professional development program for teachers to deepen their content knowledge through immersion in rigorous challenges and close analysis of student work. (<http://www2.edc.org/CDT/dmi/dmicur.html>)
- The *Mathematical Tasks Framework* was developed by Dr. Margaret Smith and her colleagues at the University of Pittsburgh, after nearly a decade collaborating on QUASAR.
- Frameworks Organizing the Big Ideas of Mathematics
 - Regional K-12 Mathematics Curriculum Framework
 - PA Standards-Aligned System
 - NCTM Curriculum Focal Points

