

Making Mathematical Connections is a two-year program, with the potential for a third year. For each year of participation in the program, you will receive 4 graduate credits. No tuition or fees will be charged. We ask that you make at least a two-year commitment to the program, and agree to participate in the following program activities:

Year One: Number and Algebraic Thinking

Time	Activity
June 9 and 10 2010	Two day workshop for baseline assessments and other launch activities.
August 9-13 and August 16-20	Two week workshop on Number and Algebraic Thinking, including Problem-Based Inquiry, Focus on Children's Thinking, and Connections to the Curriculum.
Academic Year 2010-2011 dates TBD	Four one-day workshops with focus on implementing specific classroom lessons in Number and Algebraic Thinking.
Academic Year 2010-2011 (you pick a day)	Content-Focused Coaching in Number and Algebraic Thinking, including a classroom visit and pre- and post-lesson conferences.

Year Two: Geometry and Measurement

August 2011 Dates TBD	Two week workshop on Geometry and Measurement, with special emphasis on ratio and proportion, including Problem-Based Inquiry, Focus on Children's Thinking, and Connections to the Curriculum.
Academic Year 2011-2012 dates TBD	Workshop with focus on implementing specific classroom lessons in Geometry and Measurement.
Academic Year 2011-2012 (you pick a day)	Content-Focused Coaching in Geometry and Measurement, including classroom visit and pre- and post-lesson conferences.

For more information, or to apply, contact Eric Kuennen at (920) 424-1059 or email kuennene@uwosh.edu or visit www.uwosh.edu/mathematics/connections

Making Mathematical Connections: Mathematics Knowledge for Teaching in Grades 4-8



Your students **CAN** do it and **LOVE** it!

Announcing a **new and exciting** professional development opportunity...

- **Collaborate** with your peers to study the rich connections in mathematics
- **Build** a deep and flexible knowledge of mathematics
- **Learn** how to listen and respond to student reasoning to press your students for conceptual understanding
- **Explore** manipulatives and resources – free to keep for use in your classroom
- **Receive** 4 graduate credits per year, substitutes, parking, mileage and food all at no cost to you!

Summer 2010 Workshop Dates

June 9 – 10, August 9 – 13, and August 16 – 20

All workshops are held at the University of Wisconsin Oshkosh.

For more information, or to apply, contact Eric Kuennen at (920) 424-1059 or email kuennene@uwosh.edu or visit www.uwosh.edu/mathematics/connections

Make Math Your Students' Favorite Class! (and yours, too)

Making Mathematical Connections is a program developed for teachers in grades 4-8 by the University of Wisconsin Oshkosh in partnership with seven school districts in Northeast Wisconsin.

Every year of the program, you will attend a two-week summer workshop on mathematics content and four academic year workshops with a focus on curriculum implementation. The sessions will be taught by award-winning mathematics educators using a collaborative learning model. Small-group work will be followed by large-group discussion.

Each day of the summer workshop will focus on a specific mathematics topic, via three types of sessions:

Problem-Based Inquiry (PBI). You will deepen your understanding of a specific content topic through problem solving. Each workshop day will begin with working in small groups on rich problems designed to spark and sustain conversation about, and exploration of, a specific piece of the school curriculum. You will be engaged in analyzing solutions and methods, exploring representations, communicating, and making mathematical arguments.

Focus on Children's Thinking. We will then study children's thinking and misconceptions about the specific content topic, as identified in the research literature. You will appraise children's methods and discuss whether they are correct and generalizable. We will view video clips of children thinking aloud as they solve problems in order to better understand the ways children reason mathematically. We will also discuss how to respond to common student questions (as established in the research literature) related to the content, and address how to assess student written work (constructed response) in mathematics.

Connections to the Curriculum. We will also study how the specific content topic is treated in the various curricula used by the partner districts. We will analyze activities and discuss the underlying concepts and the purpose and motivation for their approach. You will present your ideas for how you teach the content in the classroom.

Academic Year Workshops. You will look at an upcoming unit from your curriculum, work collaboratively in teams to identify the key content and concepts underlying the unit, and develop strategies and lessons to implement in the classroom that will have a high level of cognitive demand for student understanding. You will be charged with implementing these lessons in your classroom. The next one-day workshop will then begin with sessions where participants reflect and discuss the mathematical issues arising from the previous lesson implementation.

Content-Focused Coaching. Once each year, one of the program leaders will visit your class for some content-focused coaching. You will identify the goals and strategies of the lesson and some specific focal points of attention for the teacher and coach. The goal of this coaching component of the program is not to evaluate you but to help you enrich and refine the mathematical depth and accuracy of your lessons, and increase the level of cognitive demand and press for student understanding in your classroom.

We will focus on **making connections** in mathematics. Not just connections among math concepts but also connections among math concepts and the curriculum, children's thinking and teaching strategies.

Making Mathematical Connections is also about **you** connecting mathematically with your peers to explore, discuss and learn more about math and the teaching of mathematics.