UNL Welcomes Dr. Ira Papick

Many of you may recognize the name of Dr. Ira Papick, the newest member of the University of Nebraska – Lincoln’s Department of Mathematics. He co-authored Algebra Connections, one of the books utilized by the Math in the Middle Program.

Dr. Papick comes to Nebraska from the University of Missouri – Columbia, where he had been a faculty member since 1978, and most recently a Curator’s Teaching Professor. In 2004, Dr. Papick was awarded the prestigious Presidential Award for Outstanding Teaching, beating out professors from all four campuses of the University of Missouri. While a member of the Mathematics Department at the University of Missouri, he served as the Director of the Honors Program, Director of Graduate Studies, Undergraduate and Graduate Advisor, and as a member of the Curriculum Committee. Dr. Papick was also the co-organizer of the department’s Algebra Seminar for a decade.

From 1997 to 2003, Dr. Papick served as a consultant for Project NExT, a mentoring program for new or recent Ph.D.’s in the mathematical sciences. The project assists new faculty as they navigate through new responsibilities and develop as teachers and learners of undergraduate mathematics.

Throughout his career, Dr. Papick has enjoyed working with both pre- and in-service teachers, and looks forward to continuing these activities in Nebraska. In fact, he holds undergraduate and Master’s degrees in mathematics education, but changed focus when he became enamored with mathematical expressions and developed a love of commutative algebra.

In his spare time, Dr. Papick enjoys golf and long hikes with his wife, particularly through the mountains of northern Italy.

M2 Graduates Go Forth & Multiply: Teacher Leadership Roles

Nebraska’s educators who have graduated from the Math in the Middle Program continue to make amazing contributions to primary and secondary education. Some have gone on to be team leaders at their district level, assisting colleagues by providing comprehensive lesson plans and professional support. Others have worked tirelessly to affect the standards by which Nebraska’s students’ mathematical achievement is measured. Whatever their leadership role, Math in the Middle has provided its graduates with the knowledge and confidence to make fundamental changes that impact mathematics education.

Here are some examples of how Math in the Middle teachers are making a difference:

- Revision of Nebraska’s elementary and secondary content standards is currently underway. Focus on the mathematics curriculum began on March 30 with a conference of over sixty educators from across the state who debated what mathematical concepts are essential for students to know upon graduation. M2 members of the Math Standards Work Group are Delise Andrews, Tricia Buchanan, Doug Glasshoff, Tom Harrington, Kristin Johnson, Marci Ostmeyer, Dot Snesrud, Sandi Snyder and Tina Thompson.
- The Nebraska Association of Teachers in Mathematics (NATM) is following the development of the statewide standards and assessments very closely. NATM’s leadership is replete with M2 participants and educators: President Dan Schaben is a Cohort 1 graduate currently at Arapahoe Public Schools; Nebraska Wesleyan Professor and M2 instructor, Kristin Pfabe, is the Second Vice President; Patience Fisher, UNL Mathematics education and M2 instructor is the College Math Representative. M2’s second cohort has four board members: Tina Thompson; Elementary School Representative; Chad Larson Region 1 Representative; Stacey Aldag, Workshop Coordinator; and Dot Snesrud, Newsletter Editor. For more information on NATM, please visit their site at www.natmonline.org.
- Math in the Middle Cohort 3 Graduate Jalena (Clement) Slack has taken a position at ESU 8 in Neligh, where she is the Project Coordinator for the Nebraska Mathematics Professional Development Series (NMPDS). Its mission is very similar to the Math in the Middle Institute – to assist students as they make the precarious transition from the middle grades to the advanced high school curriculum. Jalena indicated that one of her responsibilities involves travelling to different parts of the state to “make sure that our teachers are well taken care of.”
- One of the projects sponsored by the NMPDS is a series entitled Collecting, Analyzing and Representing Data. Along with Jalena, other Math in the Middle graduates serving in leadership roles for this project are Tina Thompson and Linda Moore of Cohort 2, and recent Cohort 3 graduate Deb Boergeln. These three were selected as Teacher Leaders who will act as facilitators for Professional Learning Committees created as part of the project. Part of their job will be to ensure that everyone is comfortable with...
Math Challenge Corner

Cornering the Queen

This is a game for two players in which a chess queen is initially placed in the far right column or in the top row of a chessboard. The object of the game is to move the queen to the lower left corner of the chessboard while observing these simple rules: during one player’s turn, the queen may move any number of squares in exactly one direction – south, west, or southwest (along a diagonal path). The players alternate turns until the queen reaches the lower left corner; the player to accomplish this on his or her turn wins the game.

For example, suppose the queen is placed in the upper right corner of the chessboard to begin the game. Then the first player may win by moving the queen along the diagonal to the lower left corner. Now suppose a game begins with the queen in one of the middle squares along the top of the chessboard, and that the first player moves the queen west (along the top row) to the far left column. The second player may now win the game by moving the queen south, down the column to the lower left corner.

Puppies and Kittens

(See The Teacher’s Circle: Finite Games by Paul Zeitz)

This game, also played by two people, begins with two piles of counters, one representing puppies, the other kittens. The number of counters in each pile is arbitrary. The players alternate turns taking counters from the piles while observing these rules: in one turn, a player may take any number of counters from either of the two piles, or take the same number of counters from both of the piles. The player to take up the last counter or counters on his or her turn wins the game.

Questions:

1. What do these games have in common? What is different about the two games?
2. Can you determine a strategy or strategies for winning the game?

Hint: For help with this, contact Kim Hirschfeld-Cotton, a recent graduate of M2’s Cohort 3. Kim’s expository paper addressed strategies for winning these games and ways to include the game in a middle level classroom. More information will be posted on the Math in the Middle Web site in late Fall 2008.

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the activities associated with the program and to provide additional assistance where necessary. In addition to the M2 graduates serving in leadership roles, several graduates will also be participating in the project. Among other learning opportunities, participants will utilize the My eLearning Angel webware to make statewide contact, and provide a forum to communicate their experiences and ideas, and to generally provide support to their colleagues.

- Five graduates from our program in the Lincoln Public Schools District have become Teacher Leaders, offering assistance to colleagues ranging from teaching demonstration lessons to collaborative planning, allowing other teachers to learn from their shared M2 experiences. Cohort 1 graduates Julie Kreizel, Laura Parn, Darla Berks and Delise Andrews, and Cohort 2 graduate Amy Nebesiak are all leaders in the LPS district. Laura is a full time Math Teacher Leader for grades 3 through 5; Julie is the teacher leader for grades 7 and 8 (but still spends 40% of her time in the classroom); and Delise is the teacher leader for grade 6 and for technology, and is also the Coordinator for the LPS Data Warehouse Project. Amy and Darla are serving as teacher leaders for teachers of algebra, specifically as part of the LPS district’s involvement in a study sponsored by John Hopkins University on algebra instruction. Staff development is a primary focus for LPS teacher leaders, so part of their job is to assist other teachers in the district with lesson plan preparation, engage colleagues in co-teaching, and work with teams to find solutions to specific classroom or curricular challenges. Delise explained that the Data Warehouse Project is a “web application which will give schools and PLCs real time access to data which can in turn be used to enhance instructional decision making and improve student achievement.”

- And congratulations to Stacey Aldag of Cohort 1, who has recently taken a position at Northeast Community College (NECC) in Norfolk. The Mathematics Department at NECC has continued to enjoy increasing enrollments and with it new positions. This semester Stacey is teaching “Elementary Algebra classes, a Math for Nurses, a Math for Physical Therapist Assistants, and a Foundations class.” Stacey stated, “I am excited for my spring semester classes as I will be teaching a class for elementary teacher majors allowing me to utilize my Math in the Middle training to help train ‘new’ teachers.”

There are many other Math in the Middle graduates who have assumed leadership roles, both large and small. If you have taken on a leadership position or experienced a change in job duties as a result of your participation in M2, we want to know. Contact Shannon Parry in the Center for Science, Mathematics & Computer Education.

Impacts made by Math in the Middle can be felt throughout the state. Our graduates take their gained knowledge, shared experiences, and newfound confidence with them back to their schools, benefitting both their colleagues and their students. The teachers’ enthusiasm for teaching and love of mathematics is contagious, and it will permeate all other academic pursuits, building stronger students and future leaders.