NMSSSI assists three more teachers on way to receiving MATs in August

Eighteen Omaha Public Schools teachers have earned their master’s degrees from the University of Nebraska-Lincoln as a result of participation in the Math in the Middle Institute Partnership, while three other Lincoln teachers also earned them by utilizing courses through the Nebraska Math & Science Summer Institutes. They were among approximately 400 students who received advanced degrees at the Aug. 13, 2010, summer commencement at UNL.

The OPS teachers completed the challenging 12-course M² program in less than two years and have earned a Master of Arts for Teachers degree with a Specialization in the Teaching of Middle Level Mathematics from the Department of Mathematics.

The 18 OPS teachers are: Tanya Archie, Benson High School; Pamela Arvie, Prairie Wind Elementary; Amy Bystrom, Pawnee Elementary; Connie Colton, McMillan Magnet Teaching Center; Patrick Derr, Springville Elementary; Jonelle Dickmeyer, Pinewood Elementary; Jodie

Continued on Page 4

NSF approves $3 million NebraskaNOYCE grant

We are pleased to announce that the National Science Foundation approved a $3 million NebraskaNOYCE grant in August. NebraskaNOYCE will establish a Teaching Fellowship program and a Master Teaching Fellowship program to increase the number of high quality mathematics teachers earning certification at UNL and to significantly increase the number of high quality mathematics teachers teaching in high-need schools in Nebraska. The Master Teaching Fellowship program is for current Nebraska math teachers with master’s degrees.

Exceptional and dedicated math teachers are needed for this new and exciting opportunity to be a Master Teaching Fellowship. Courses will begin in Summer 2011. Salary supplements as well as fellowships to cover the cost of tuition and fees will be awarded.

To read more about this program, please visit scimath.unl.edu. Online applications will be available later this fall. E-mail NebraskaNOYCE grant coordinator Wendy Smith at wsmith5@unl.edu if you have questions not addressed online.
Spotlight on Kelli Anderson

Kelli was a 2010 Educator Award winner, presented by State Farm, and received a $1,000 prize.

Grade: Kindergarten
School and District: Elliott Elementary School, Lincoln Public Schools
Years Teaching: 4
Program: Primarily Math, Cohort 1

Tell us more about the State Farm Outstanding Educator Award: “I had to write essays under categories about teaching, excellence and learning. It was good for me to take a pause, look back and look ahead; my learning curve has been very steep. It was very humbling to win since I just finished my fourth year, and it was a good motivator.”

Why did you join NebraskaMATH and how has your experience been? “I had two simultaneous thoughts: in college I swore I would never take a math class again and my students really do need a much better math teacher then they have. The needs of my students won out, and I’ve worked hard for their benefit. They like knowing their teacher is in school too, and their attitude about math is much better now that I enjoy teaching math.”

Do you remember your favorite teacher? “It’s a tie between my kindergarten and first-grade teachers. I liked them so much that my mom thought I wanted them to be my mom instead of her.”

What is your favorite thing about teaching? “Figuring out how to do it better. It’s only my fourth year, so I haven’t even come close to knowing all I can.”

What’s on your iPod? “Besides kindergarten music? Mellow music. I usually drive in silence - those are the few moments of the day that are mine to think.”

What’s your favorite TV show? “Not cartoons. Any show that I don’t have to watch every week in order to keep up with the storyline, such as Numbers or Bones.”

What is your favorite thing about Nebraska? “I love that Lincoln has a small town feel. It’s not so big that it’s overwhelming, but it’s big enough for opportunities.”

Know someone to Spotlight? Our new Web feature, the “Spotlight,” honors a Nebraska math or science teacher for their achievements. For example, Kelli Anderson of LPS won a 2010 Educator Award (read her interview with us at left), and her interview appears online. Soon it will be replaced with the next featured teacher. If you or a teacher you know should be honored in our Spotlight, please contact Lindsay Augustyn at laugustyn2@unl.edu to nominate them. Watch scimath.unl.edu for more Spotlights.

Prime Time game!

The new online game Prime Time by Calculation Nation™ allows students to experiment with probability concepts in a fun and educational way. Lotteries provide a good real-life example.

In the game, students will need to think about which random number generator will give them the greatest chance of landing on a space that earns points. For instance, a player on 16 could earn 17 points by moving 1 space or could earn 19 points by moving 3 spaces. Therefore, a spinner with the numbers 1 4 would have a 50% chance of landing on one of those two spaces, but rolling a six-sided die would only have a 33% chance of landing on one of them.

Students earn points for landing on the prime number spaces. In addition, bonuses are earned for twin prime pairs and other numbers with special relationships, so students are implicitly exposed to several number theory topics.

http://calculationnation.nctm.org/
Resources
Responding to Diversity

NCTM, guided by their Principles and Standards for School Mathematics, has prepared a series of books for teachers who face the growing challenge of teaching mathematics to increasingly diverse groups of students in their classrooms.

The books, entitled “Mathematics for Every Student: Responding to Diversity,” are available in three grade-band volumes: Pre-K-5, Grades 6-8 and Grades 9-12. Individual chapters are also available for download online.

The instructional strategies presented in the Grades 6-8 volume, for example, reflect that diversity can come in various forms and provides articles written by teachers who have experimented with different teaching techniques in the classroom. Articles are presented in three formats, including cases of classroom practice, instructional strategies and teacher development. The articles demonstrate how connecting real-life activities with mathematical concepts, and building on students’ knowledge and experiences can help them excel in the classroom.

To purchase these books or to download chapters, visit: http://www.nctm.org/catalog/productsviepx?id=300

Help needed to narrow college-access gap

College enrollment rates among low-income students and those who would be the first in their family to receive higher education lag behind when looking at overall national college attendance rates. According to the National Center for Education Statistics, these students are less likely than their peers to expect to earn a bachelor’s degree or higher. Research has identified several reasons for this achievement gap. Some students are not academically prepared for college. Others lack awareness of the many steps required to enter college, or they don’t receive enough guidance and support to complete the steps, according to the Regional Educational Laboratory West at WestEd.

A recently published practice guide from the Institute of Education Sciences (IES) of the U.S. Department of Education entitled, “Helping Students Navigate the Path to College: What High Schools Can Do,” offers educators and community leaders approaches for improving college access rates among students.

Some recommendations for high schools are to: starting in ninth grade, offer college-preparatory courses, make students aware of the courses required for college, and assist those students continually over four years to achieve those standards; increase families’ college-related financial awareness; and help students apply for financial aid.


Modifying language on math tests helps ELL students

A study prepared by REL West at WestEd found that simplifying the language (or “linguistic modification”) on standardized math tests made it easier for some English language learners (ELLs) to focus on and grasp math concepts, therefore bringing a more accurate assessment of their math skills. For the four scoring approaches analyzed, the effect of linguistic modification was greatest for ELL students, followed by non-English language arts proficient and English language arts proficient students. The effect between the three subgroups varied and depended upon the scoring approach used. Students in grades 7-8 were given the tests. The findings showed that the language changes did not affect the math construct being assessed.

Read study at: http://www.wested.org/cs/we/view/rs/1033
Five graduate students earn Ph.D.s in May, August

Three University of Nebraska-Lincoln statistics and mathematics graduate students who helped with the instruction of NebraskaMATH and Math in the Middle courses this past year have recently graduated from UNL with doctoral degrees. Here is a little bit of background on each of them and their plans for the future, as well as an update on two other graduate students who helped with past M2 cohorts:

**Jennifer Green**, Ph.D. in statistics, graduated Aug. 13 and accepted a position as Research Assistant Professor in the Department of Statistics and the Center for Science, Mathematics & Computer Education. Green is originally from Center, Neb., and graduated from Creighton High School. She received her bachelor’s degree in education from Chadron State College. Green said she decided teaching high school mathematics was not a good fit for her, so she began graduate work in the Department of Statistics at UNL. Green really enjoys teaching and looks forward to continuing research with her colleagues.

**Inês B. Henriques**, Ph.D. in mathematics, graduated May 7 and holds a Visiting Assistant Professorship at the University of California, Riverside, where she hopes to apply the teaching and research expertise she developed during her stay at UNL. Henriques was born in Lisbon, Portugal, where she received the Portuguese undergraduate degree of Licenciatura in applied Mathematics and Computer Science. She grew a strong taste for commutative algebra, spurring the move to Nebraska. While at UNL, Henriques taught an array of standard courses in mathematics while working on her Ph.D. dissertation, but describes working with Math in the Middle as an exemplary and outstanding teaching/learning experience.

**Silvia Saccon**, Ph.D. in mathematics, graduated Aug. 13 and will join the Department of Mathematics at the University of Arizona as a post-doctoral fellow. Saccon will focus on undergraduate education and will have the opportunity to continue to work with in-service teachers. Saccon is originally from Venice, Italy, and graduated from the University of Padova (Italy). Her research area is in commutative algebra, and she is currently studying the direct-sum behavior of a class of modules over certain commutative rings. She has worked with both middle-school teachers in the Math in the Middle program and high-school teachers in the Nebraska Algebra program, and those experiences have positively influenced her teaching.

Two other mathematics Ph.D. students who have worked with past cohorts of Math in the Middle are **Nate Axvig** and **Deanna Dreher**. Axvig graduated Aug. 13 and will be joining the faculty of the Department of Mathematics and Computer Science at the Virginia Military Institute this fall. Dreher graduated May 7 and will be taking care of her infant son while teaching an occasional course as a lecturer.

MAT Degrees, From Page 1

Emerson; Morton Magnet Middle School; Patty Hastings, Western Hills University Partnership Magnet; Paula Jakopovic, Field Club Elementary; Mary Beth Kilnoski, Marrs Magnet Middle School; Jessica Korth, Bryan Middle School; Philip LaFleur, Monroe Middle School; Jocelyn Masasi, Marrs Magnet Middle School; Loretta Ohnemus, Burke High School; Valerie Schovanec, OPS District Office; Crystal Simpson, Standing Bear Elementary; Lisa Vavra, Alice Buffett Magnet Middle School; and Keri Witherell, Lewis and Clark Middle School.

Lincoln teachers Katie Soto, a sixth grade math, science and keyboarding teacher at Park Middle School; Ryan Shuman, an eighth-grade math teacher at Pound Middle School; and Scott Burns, a math teacher at Pius X High School, also earned their MAT degrees on Aug. 13, in part by taking advantage of opportunities to take NMSSI courses.