



April 2011

NMSSI: The summer of learning

Would you like to take a graduate course this summer to enhance your knowledge of mathematics or good pedagogy? With the start of the NeSA-M in Spring 2011 and much attention being paid to the Common Core State Standards in Mathematics, investing in your own education has never been more important. NMSSI offers 18 courses to K-12 mathematics teachers in nine locations around the state, and fellowships are available to help with the cost of tuition. For more information, see our Web site: <http://scimath.unl.edu/nmssi>.

U.S. Secretary of Education discusses state standards

In the April 2011 edition of NCTM's *Summing Up*, U.S. Secretary of Education Arne Duncan promotes the efforts of the U.S. Department of Education to support the



Arne Duncan

state-led effort to write the next generation of math and English assessments as "game-changers" in education. Duncan says they will measure student achievement against the new standards and track whether students are prepared for success in colleges and careers - these are the assessments "that you've longed for."

Duncan added, "In the fiscal 2012 budget, President Obama has proposed \$206 million to support projects for teachers of mathematics and the other STEM subjects. These projects will provide you with what you need to succeed by creating the curricula and instructional materials, identifying proven strategies, and providing professional development." Duncan encourages teachers to rise to the challenge to use these projects and the new standards to improve student achievement.

Read the full article at:

<http://www.nctm.org/about/content.aspx?id=29275>

State Farm becomes major NMSSI sponsor

We are pleased to announce that State Farm has specifically allocated funds to support the Nebraska Math & Science Summer Institutes (NMSSI). This funding will allow 32 teachers to take an NMSSI graduate course tuition-free.

State Farm joins the Don Miller Fund as a major sponsor. We also welcome Pfizer as a sponsor of the NMSSI.

In addition to our sponsors, NMSSI fellowships will be supported by the Department of Earth and Atmospheric Sciences, the Math Teachers for the 21st Century Expendable Fund and the CSMCE.

To apply for a fellowship for NMSSI (to cover tuition or travel expenses), please visit <http://scimath.unl.edu> and click on "Apply Now."

By creating an account in our application portal, you can fill out the simple NMSSI application quickly and easily. Review of NMSSI Fellowship applications begins this week, so don't delay. The next round of applications will be reviewed in a few weeks.

We understand the significant cost barrier to taking graduate courses, and we hope that generous donations

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Spotlight on Holly Liibbe



Holly Liibbe was honored as an A+ Educator of the Week in the Lincoln Journal Star in January 2011. Parents of an eighth-grade student nominated Holly for her “constant encouragement” of their daughter and her “wonderful job of explaining all things algebraic.” This student came to love math and her parents reported that Holly showed her that it’s not just about math, it’s about working hard to achieve goals, and the knowledge that there is grace in the striving to do one’s very best.” Bravo!

School: Culler Middle School, Lincoln Public Schools

Years Teaching: 4

Program: Nebraska Algebra, Cohort 1

How did you help the student who nominated you for the honor? I worked with her after school on the things that she was struggling with. I use a lot of manipulatives and multiple ways to solve problems during class. The student that nominated me just needed to see her potential. It was there the whole time.

How has your teaching changed as a result of NebraskaMATH? The classes that I’ve taken through NebraskaMATH have challenged me mathematically and given me respect for the complexity and beauty in mathematics. They have sparked my passion for math, which I want to pass on to my students. I don’t want my students to just do math. I want my students to see why and how the math works.

Do you remember your favorite teacher? Ken Mumm was one of my education professors in college. He was also my assistant principal in middle school. He inspired me because of his passion for what he did. He truly cared about middle school students and wanted middle school teachers to share that passion as they prepared to teach.

What is your favorite thing about teaching? My students. I love watching them grow as people and realize their potential.

What’s on your iPod? A lot of ’90s and acoustic, and Derek Webb, Secondhand Serenade, Dashboard Confessional, Plain White T’s, Michael Buble, Matthew West

What’s your favorite TV show? Modern Family, Parenthood

What is your favorite thing about Nebraska? It’s a tie between the thunderstorms and the sunsets.

Plan a family night at school

Do you think your school would benefit from hosting a night for parents and students to interact with math and science experiments? MSPnet’s PRISM Showcase now features a short video online that explains how to run a successful **Math and Science Family Night**. PRISM (the Partnership for Reform in Math and Science in Georgia) also provides a timeline, budget and evaluation forms. View the video online at: <http://prism2.mspnet.org/index.cfm/22397>

AMS Notices focuses on math education

The March 2011 issue of AMS Notices magazine focused on mathematics education, featuring essays by veterans who can speak in detail of first-hand experiences, which included articles written by NebraskaMATH’s Jim Lewis, Ruth Heaton and Ira Papick. The articles explore different means by which research mathematicians can get involved in the education process. Notices Associate Editor Mark Saul has assembled a valuable testimony to ongoing efforts to improve the flow of knowledge.



Ira Papick

Lewis and Heaton, as well as Papick, write about teacher preparation, and particularly about professors of education and mathematics collaborating to develop exemplary practices. Sybilla Beckman, an author whose textbook is used in Primarily Math courses, offers an essay with a rare and valuable view of a mathematician who has spent significant time and effort working directly in an elementary school classroom.

Download these articles and more online at:
<http://www.ams.org/notices/201103/>



CALENDARS

NebraskaMATH Summer 2011

Math in the Middle OPS Cohort 2

May 25-27	MATH 896 Capstone
June 20-24	MATH 808T
July 7-8	Master's Orals

Primarily Math

June 6-10, 13-17	MATH 802P & TEAC 907 (Cohort 2 - La Vista)
June 6-10, 13-17	MATH 800P & MATH 801P (Cohort 3 LPS)
June 20-24, June 27-July 1	MATH 800P & MATH 801P (Cohort 3 West - Grand Island)

Nebraska Algebra

June 6-10, 13-17	MATH 810T & EDPS 991 (Cohort 3)
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New Teacher Network

June 6-10, 13-17	MATH 896 & TEAC 892
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NMSSI Summer 2011 Courses

Mathematics Courses (Location)

June 6-10	MATH 800T (Holdrege)
June 6-17	MATH 896 & TEAC 892 (Lincoln)
June 13-17	MATH 800T (La Vista)
	MATH 802T (Kearney)
	MATH 808T (Scottsbluff)
June 20-24	MATH 800T (Norfolk)
June 20-July 1	MATH 802T (La Vista)
	MATH 896 (La Vista), MATH 805T (La Vista) & TEAC 801 (La Vista)

Continued in next column

& = Courses may be taken concurrently

June 27-July 1	MATH 800T (North Platte) MATH 802T (Columbus) STAT 892 (Hastings)
July 11-15	MATH 806T (Lincoln) MATH 896 (Lincoln)
July 18-22	TEAC 808J (Lincoln) TEAC 890 (Lincoln)
Science Courses in Lincoln (Notes)	
June 6-10	CHEM 898
June 11-23	GEOS 898 (Travel in NE, SD, WY)
June 13-17	AGRO 896 (online June 6-July 8)
July 11-22	GEOS 898 (Exploring Geology of our Solar System)
July 25-Aug. 5	GEOS 898 (Geology of North America)

Where has your T-shirt been?



NebraskaMATH's Michelle Homp sent us a photo from Carlsbad, N.M., wearing her NebraskaMATH T-shirt. Send us photos of you wearing your NebraskaMATH T-shirt as you travel! If you want to buy a shirt, please contact Lindsay Augustyn at laugustyn2@unl.edu.



NebraskaMATH is supported by the National Science Foundation grant DUE-0831835, with additional support from the Center for Science, Mathematics and Computer Education, located at the University of Nebraska-Lincoln.

Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. The University of Nebraska-Lincoln does not discriminate based on gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation.



Highlight on Action Research



Oral Presentations: Exploring presentations of homework problems as alternative assessment tools

by Michael Ford, M² Cohort 4

Abstract: In this study of my fifth-grade mathematics class, I investigated a method of assessing homework presentations as an alternative means of assessment from the more traditional approach of paper and pencil testing. By changing the number of daily problems assigned in my classroom to include shorter assignments and implementing longer, more difficult story problems, I found that students enjoyed mathematics more and had a deeper understanding of the concepts. Increased retention of material, enhanced abilities to communicate problem solving methods, and improved attitudes were all positive side effects of this project. As a result of my study, I have changed my methods of assessing homework from traditional methods of assessment to employ the rubric-scored presentations used in my study. Results of the study dramatically changed the way I view homework's purpose in and out of the classroom. Instead of homework being used as my sole tool for reinforcement and assuming more homework is better, I view it as one of the many ways to check for understanding and realize more is not always better.

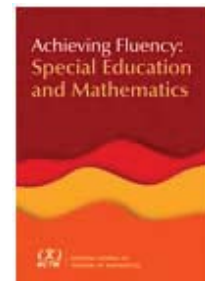
To read Michael's full paper and other action research papers from the Math in the Middle Program, see

<http://scimath.unl.edu/MIM/ar.php>

Resources

NCTM: Achieving Fluency

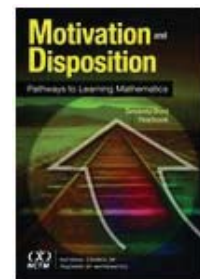
A crucial question that faces educators when they work with any student struggling with mathematics is whether it is the learning or the teaching that falls short. "Achieving Fluency: Special Education and Mathematics" addresses the role that all teachers play in helping struggling students, those with disabilities and those lacking foundational mathematics knowledge. The volume will serve as an important guide for all teachers but is a must-read for teachers of students with disabilities. - NCTM



<http://www.nctm.org/catalog/product.aspx?id=13783>

NCTM: Motivation and Disposition

Teaching mathematics is a much broader endeavor than simply helping students to acquire skills and problem-solving strategies. Teachers also strive to develop motivation and positive dispositions qualities that have long-term effects on students' confidence to do mathematics and their career choices. The "Seventy-third Yearbook, Motivation and Disposition: Pathways to Learning Mathematics" explores a wide variety of perspectives on motivation and disposition that relate to mathematics teaching and learning. - NCTM



<http://www.nctm.org/catalog/product.aspx?id=13864>

A book and a Webinar

The author of the best-selling book "Beyond Pizzas & Pies: 10 Essential Strategies for Supporting Fraction Sense, Grades 3-5," Julie McNamara, will be presenting two 90-minute Webinars on April 20 and 27 through Math Solutions' ePD Webinars. We recommend reading this book, but you may also want to participate in the Webinars. Register at: http://www.mathsolutions.com/email_html/1103_FractionAssessment_ON.html



Achieve: College, career readiness is new norm

Achieve's "Closing the Expectations Gap" report released in February 2011 gives an update on states' policy adoptions, and results show the goal of aligning the expectations for high school graduates with the demands of college and the workplace continues to be met.

The 2010 survey of all 50 states and the District of Columbia (D.C.) revealed:

- **Standards:** 47 states and D.C. have developed and adopted high school academic standards in English and mathematics that are aligned with college- and career-ready expectations. Much of the progress in standards in 2010 was the result of widespread adoption – in 44 states and D.C. – of the K-12 Common Core State Standards (CCSS) in mathematics and English language arts.

- **Graduation Requirements:** 20 states and D.C. require all students to complete a college- and career-ready curriculum to earn a high school diploma. Florida and Utah were the two states to raise their graduation requirements to the college- and career-ready level in 2010.

- **Assessments:** 14 states administer college- and career-ready high school assessments capable of producing a readiness score that postsecondary institutions use to make placement decisions. In 2010, only one new state – Delaware – adopted a policy to administer a college- and career-ready test to its high school students.

- **P-20 Data Systems:** 22 states have operational P-20 longitudinal data systems that link states' student-level K-12 data with similar data from their postsecondary systems and are matching such data annually. The matching of student level records began for the first time in six states in 2010: Hawaii, Indiana, Kansas, New Mexico, New York and Virginia.

- **Accountability:** 25 states have now incorporated at least one of four accountability indicators that Achieve has identified as critical to promoting college and career readiness. Only Texas meets Achieve's criteria regarding the use of all indicators in its accountability system.

To see a full copy of the report, go to:

www.achieve.org/ClosingtheExpectationsGap2011.

New vs. 'old school' math

Professor Kevin Devlin, a mathematician and senior researcher at Stanford University, spoke March 5 on NPR's Weekend Edition about why elementary math looks different now than it did for the parents of elementary school students. In "The Way You Learned Math Is So Old School," Devlin talks about the focus on algebraic thinking instead of arithmetic itself. The interview transcript may be useful for parents: <http://www.npr.org/templates/transcript/transcript.php?storyId=134277079>. Listen at: <http://www.npr.org/player/v2/mediaPlayer.html?action=1&t=1&islist=false&id=134277079&m=134288523>.

KU's Knight addresses instructional coaching

UNL's National Center for Research on Rural Education (R2Ed), welcomes you to attend the first presentation in its 2011 Creating Rural Connections Speaker Series. The University of Kansas' Dr. Jim Knight will speak Thursday, April 21, from 3:30 p.m. to 5 p.m. in the Unity Room of the Jackie Gaughan Multicultural Center (Nebraska Union, UNL City Campus). This presentation is free, open to the public and requires no registration.



Jim Knight

Knight will explore the concept of instructional coaching and its role in enhancing the quality of K-12 education. He will define this form of professional development, explain the principles on which it was founded, and specify the collaborative steps instructional coaches take to improve teacher practice and subsequent student outcomes.



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such as State Farm's will help teachers recognize funds are available and would greatly reduce their costs. We are actively working with the University of Nebraska Foundation to raise more donations from private donors.

Money contributed to the Math Teachers for the 21st Century Expendable Fund will go to tuition fellowships for teachers who take NMSSI courses or for travel and living expenses for teachers who take a course in a location outside their home community.

NMSSI courses can help teachers earn a master's degree in an accelerated time frame, prepare for the new Common Core Standards in Mathematics, and strengthen understanding of mathematical concepts. The one- or

two-weeklong courses also allow for 40 hours of face-to-face instruction and are offered in nine locations across the state to reduce the need for teachers to travel.

We encourage you to sign up for courses soon to help us ensure these courses are offered. High enrollments this summer could mean more opportunities in your area next summer.

State Farm insures more cars and homes than any other insurer in the U.S., is the leading insurer of watercraft and is also a leading insurer in Canada. Our 17,800 agents and more than 66,000 employees serve 81 million policies and accounts – more than 79 million auto, fire, life and health policies in the United States and Canada, and nearly 2 million bank accounts. State Farm Mutual Automobile Insurance Company is the parent of the State Farm family of companies. State Farm is ranked No. 34 on the Fortune 500 list of largest companies. For more information, please visit statefarm.com® or in Canada statefarm.ca®.

Who inspired you?

Read about inspiring teachers online at <http://scimath.unl.edu/giving/inspiringteachers.php>. Submit your story to us via e-mail to nebraskamath@unl.edu, and we will post it online!



DONATE NOW @ <http://scimath.unl.edu/giving>

Yes, I want to support the CSMCE and its work to strengthen mathematics teaching and learning in K-12 Nebraska Schools.

- Enclosed is my check for \$50 \$100 \$250 or \$_____ made payable to the University of Nebraska Foundation.
- Please charge \$50 \$100 \$250 or \$_____ to my: Visa Mastercard Discover American Express

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I would like my gift to support the following areas:

\$ _____ CSMCE Development Fund (to support the Center's most critical needs)

\$ _____ Math Teachers for the 21st Century Endowed Fund

\$ _____ Math Teachers for the 21st Century Expendable Fund

Please mail your contribution to:
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I prefer to make this donation anonymously.
Thank you.

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NebraskaMATH is supported by the National Science Foundation grant DUE-0831835, with additional support from the Center for Science, Mathematics and Computer Education, located at the University of Nebraska-Lincoln.

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