
PCSM

NEWSLETTER

Leaders in Mathematics Education

January 2010

PENNSYLVANIA COUNCIL OF SUPERVISORS OF MATHEMATICS

PRESIDENT'S MESSAGE

From the President

- Janie Zimmer

THANKS to all of you who joined us at the PCSM Annual Meeting in Pittsburgh – and mucho thanks to all who helped out to make things run so smoothly. The program was excellent, and this was the first year that we had the added attraction of webcasting the sessions in real time. The archived webcasts are also available on the PCSM Web site:

<http://www.pcsmonline.org>. Log in from the links on the right-hand side of our homepage. The webcasting was made possible through the inspiration and efforts of Hope Yursa and the generous in-kind services of Drexel University. Thanks, Hope – and THANKS, Drexel!

At the conference, Linda Gojak gave us an overview and some practical suggestions related to the NCSM document: *PRIME Leadership Framework*. Jim Bohan gave us an update on the current status of the PA standards-aligned systems in mathematics. Finally, NT Etuk of Tabula Digita presented [*Educational Gaming: A Trend Line to the Future*](#).

Please check the date on the mailing label of the newsletter. If the date is

2010 (10) or earlier, it is time to renew your membership. Save money by renewing for three years. If each of us signs up a new member, our membership will double!

All of these sessions are extremely valuable for the work that we do. I was recently reflecting on these sessions, and thinking that the information given by NT Etuk was cutting edge and really stretched our thinking. Yet for most of the students that we teach, these ideas are old hat.

Our students are way ahead of us in technology. They are the “digital natives” and have never known a world when technology did not exist! Our students cannot conceive a world without technology. They learn from being engaged, doing, game play, random access, exploring options, multitasking, having things personalized to them, and going online. Most of today’s teachers teach by delivering content, presenting and telling, linear stories, showing one thing at a time, one-size-fits-all, and in person. So when dealing with their students, teachers often feel that they speak a different language—and students feel that their teachers speak with a digital immigrant accent, that most of their teachers don’t understand the new technologies and how they might relate to teaching and learning.

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The use of calculators and computers in mathematics education is essential today, yet what about the use of video games for this video-game generation? And what about the use of cell phones? Yes, cell phones! They are virtually barred from our classrooms because they are seen as an interruption to our classes and a vehicle to facilitate cheating. Yet in other countries, cell phones are used effectively to enhance the educational program and to promote learning. As leaders in mathematics education, we want to stay abreast of ways to

incorporate technology into our classrooms and to give teachers a vision of how technology may be used to inspire and motivate our students to learn high-level mathematics. . . . Something to think about. For more on this topic, visit: www.marcprensky.com/.

Finally, I would like to thank our immediate past-president, Jane Wilburne, for her outstanding leadership as president of PCSM and for the model that she has set for me. I am honored to be taking on the role to serve as your president for the next two years, and I know that I will be calling on Jane and other Board members – as well as many of you - to help me in this role. Let us work together to lead our teachers and let us invite teachers in whom we see leadership qualities to join us in PCSM.

Janie Zimmer
zimmer@rbed.us

From the Editor

- Cathy Schloemer

Happy New Year! How will 2010 be new for you? I wrote for and to my astonishment *earned a grant to receive a Promethean board in my classroom!* It was not secretly installed during the holiday break and I have not received the board yet, but training sessions began

January 18 and I am - excited, nervous, eager, anxious – and generally feeling very “new” in this my thirty-second year of teaching! Will the new technology substantially change the way I teach? Will it change the way my students learn? How will teaching and learning be better – or maybe (I hope not) worse? Stay tuned for a spring update, and in the meantime I solicit your input for sources and ideas for how I can make the best use of my new white board!

Chris Czapleski, if there were an award for best newsletter editor, I would give it to you. You so patiently and faithfully help to track down mistakes in each issue before we send the newsletter to press.

Remember, this is your newsletter. What would you like us to share? Please send correspondence to me at:

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PCSM 2009 Awards

At the Annual Meeting of the Pennsylvania Council of

Supervisors of Mathematics held at the Greentree Radisson Hotel in Pittsburgh on November 4, 2009, awards were presented to mathematics education leaders with statewide and national achievements.

Dr. Diane Briars was honored with the award for Outstanding Contributions to Mathematics Supervision. Dr. Briars holds a PhD in mathematics education from Northwestern University and has studied cognitive science and computer modeling of mathematical thinking at Carnegie Mellon University. She is the former Director of the Division of Mathematics for the Pittsburgh Public Schools.

She is recognized for her leadership in mathematics

education and supervision demonstrated by the roles she has held in national organizations. Diane was a member of the Working Groups on Evaluation and Assessment for *The Curriculum and Evaluation Standards for School Mathematics* and *The Assessment Standards for School Mathematics*. Both publications of the National Council of Teachers of Mathematics received widespread acclaim as blueprints for reform in school mathematics.

Diane has served in leadership roles for NCTM, The College Board, and the National Science Foundation. She was a member of the National Commission on Mathematics and Science Teaching for the 21st Century. Diane is currently serving as President of the National Council of Supervisors of Mathematics.

James Rubillo was the 2009 inductee into the PCSM Hall of Fame. James "Jim" Rubillo is no stranger to mathematics teachers in Pennsylvania or to mathematics educators throughout the United States and Canada. Jim has made a great impact on mathematics education – students, teachers, and policy - as he served in the position of Executive Director for the National Council of Teachers of Mathematics, and as a NCTM Board Member prior to that. Jim has also made an impact on mathematics education as a professor of mathematics, chair of mathematics department, and associate dean at Bucks County Community Colleges.

In Pennsylvania, Jim has been very active in professional organizations as a long-term member of Pennsylvania Council of Teachers of Mathematics (PCTM) and Pennsylvania Council of Supervisors of Mathematics (PCSM). He has provided outstanding service to each of these professional organizations.

Jim has been and still is a sought-out speaker for local and national gatherings of mathematics educators. When Jim speaks, people sit up and listen. He always comes through with incredible humor and, most important, with a thought-provoking message.

Jim Rubillo has made an impact on mathematics education policy, on teachers, and on other mathematics educators; but most important, he has made a dramatic impact on the students of Pennsylvania and throughout the United States.

Mary Foley was recognized with the PCSM Distinguished Service award for her tireless work in arranging programs and sponsors for PCSM Annual meetings during her tenure as President Elect and Past President. As a mathematics teacher and department chair in the North Pocono School District, Mary led an active and innovative department where teachers were early adopters of the reforms promoted by NCTM. Mary and her teachers were

involved in PCTM and NPCTM activities. She has served for many years on the Executive Boards of both PCTM and PCSM. Most recently, Mary teaches pre-service courses in mathematics education at the University of Scranton and supervises student teachers.

For the past two years, PCSM has benefited from the able leadership of Jane Wilburne as president. She was awarded the Past Presidents' Plaque in recognition for her outstanding leadership. Jane has advocated for additional meetings of the executive board in an effort to expand the role of PCSM. An important feature has been the addition of a PCSM website and enhanced communication through the PCSM listserv.

Jane has been active in so many facets of mathematics education in Pennsylvania. She is an Assistant Professor of Mathematics Education at Penn State Harrisburg and was instrumental in the forming of PAMTE as an organization designed to focus specifically on issues of interest to teacher educators.

Thanks are extended to all who took the initiative to make nominations for 2009 awards. PCSM members are encouraged to continue to identify members worthy of recognition. Nominations are accepted and welcome at any time. Award nomination forms are published in the newsletter and available on the website at www.pcsmonline.org. Any questions or communications about awards may be directed to Gen Battisto, awards chair, at genb@ptd.net. Be alert for future announcements which may direct you to the possibility of making nominations to a more generic awards address.

Submitted by Gen Battisto

NCTM's new publication: *Focus in High School Mathematics: Reasoning*

and Sense Making

In case someone has not heard, October 6 NCTM released its new publication, *Focus in High School Mathematics: Reasoning and Sense Making*. The publication is a high school follow-up to the recently published NCTM *Curriculum Focal Points* for grades K-8. Read the executive summary at

http://www.nctm.org/uploadedFiles/Math_Standards/FHSM_Executive_Summary.pdf

A companion book, *Focus in High School Mathematics: Reasoning and Sense Making in Statistics and Probability* has been published as well and will be followed by books that offer examples of ways to make reasoning and sense making central in algebra and geometry.

(For additional commentary, check out Sean Cavanaugh's article, "New Tack on Math Promoted" in *Education Week* - 5 October 2009 at <http://tinyurl.com/y9y296k> . Through NCTM, you can also access more information about the new publication at <http://www.nctm.org/standards/content.aspx?id=23749>)

Race to the Top

Is your school district participating in "Race to the Top"? If you are unaware, RTTT is, according to a letter sent to every superintendent in the state, "the largest discretionary funding for education reform ever made available by the federal government." The entire state of Pennsylvania, for example, is eligible for a maximum of \$400 million. If your district is participating in this initiative, a letter of intent and an application will already have been submitted by the time you are reading this newsletter, unless perhaps the district is waiting for the second round of applications, due June

10. Your superintendent should be able to share with you the 21-page letter that he or she received from the state. You can also find details on the RTTT website:

<http://www.ed.gov/programs/racetothetop>

The money is definitely attractive. Is the money attractive enough to compel districts to agree to all the conditions of RTTT? I believe there will be some controversy. In particular, a participating state must not have any legal

barriers to linking student growth and achievement data to teachers and principals for evaluation purposes. It should be interesting to see how this initiative plays out.

For additional information, read the article at: <http://tinyurl.com/yh2nvhh>

Snippets: News You Can Use

(1) **Fractions: What? When? How?**

"Back to School/Do the Math: Difficulty understanding fractions can add up to a whole lot of trouble " by Joe Smydo, Pittsburgh Post-Gazette

Source: Pittsburgh Post-Gazette - Monday, August 31, 2009

URL: <http://www.post-gazette.com/pg/09243/994394-298.stm>

Any experienced mathematics teacher knows that fractions are hard for students and that most students have less proficiency with them than they should. How and when, however, should students attain that proficiency? The article gives numerous interesting examples and outlines the National Mathematics Advisory Panel's recommendations.

(2) **Mathematics for Pre-schoolers**

Report Calls for National Initiative to Improve Mathematics Education for Preschoolers

Source: The National Academies

URL (Press release):

<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12519>

According to this article, very young children can learn much more mathematics than was previously thought. A 10-month-old baby, for example, can already distinguish a set of 2 objects from a set of 3. In particular, adults need to provide young children with appropriate experiences to develop their sense of number and geometry. This article outlines how that might be done according to the National Research Council's new report, *Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity*. To read the free report online, go to http://www.nap.edu/catalog.php?record_id=12519#toc

(Related to this topic, for details about how children have responded to a neuroscience-based pre-school mathematics program called Building Blocks, go to: <http://www.nytimes.com/2009/12/21/health/research/21brain.html?r=1>)

(3) Are We Leaving Behind Our Most Capable Students?

OUR NATION'S SCIENTIFIC FUTURE LOOKS BLEAK: EDUCATIONAL CRISIS by Gerald Rising

Source: The Buffalo News [New York], Opinion, Sunday, September 6, 2009.

URL:

<http://www.buffalonews.com/367/story/786743.html>

Rising provides a provocative commentary on how the expectations and accomplishments of our best students differ from those of students in China and India, for example, as showcased in the movie *Two Million Minutes*. He laments the relative lack of academic engagement of our best students and the fact that they might spend 10 to 20 hours at a week at a job rather than focusing on schoolwork. In addition, he elaborates on the history of our educational system and where the current focus on "No Child Left Behind" appears to be leading us. It is not a pretty picture, but he does offer some ideas for improvement.

(4) Learning Styles: How Crucial to Consider?

Willingham: Student "Learning Styles" Theory Is Bunk by Daniel Willingham

Source: The Washington Post, Monday, September 14, 2009

URL: <http://voices.washingtonpost.com/answer-sheet/daniel-willingham/the-big-idea-behind-learning.html>

While some educators are convinced that students learn best when instructed according to their preferred learning styles, Willingham argues that "learning style" is actually a function of what the child brings to the learning task and that therefore the "style" will vary from one learning task to another. He is concerned that an over-emphasis on learning style takes away teacher resources from other more critical aspects of the teaching task and actually reduces teacher effectiveness.

(5) NAEP Update: Grade 4 Scores Stagnant, But Grade 8 Scores Improve

NAEP Math Scores Idle at 4th Grade, Advance at 8th
by Sean Cavanagh

Source: Education Week [American Education's Newspaper of Record], Wednesday, October 14, 2009 [Online], Volume 29, Issue 8.

URL: <http://www.edweek.org/ew/articles/2009/10/14/08naep.h29.html?tkn=TNYFCtS90omfnyzfILt6FmtWPeIH18UOPYFS&print=1>

Some analysts suggest that No Child Left Behind has failed to produce desired results, with NAEP scores unchanged at 4th grade and only slightly increased at 8th grade in 2009. Racial gaps in student achievement have also persisted.

You can learn more in the following NAEP reports: online read

http://nationsreportcard.gov/math_2009/math_2009_report/ or download a copy of the report from <http://nces.ed.gov/nationsreportcard/pubs/main2009/2010451.asp>

(6) Equity in Mathematics Education

New Journal: *Teaching for Excellence and Equity in Mathematics*

Source: COMET 10(24) 27 October 2009

URL:

<http://data.memberclicks.com/site/toma/TEEMv1n1excerpt.pdf>

If you are interested in a journal dedicated to equity in mathematics education, explore this website to read two sample articles and to check out the table of contents of the new journal, *Teaching for Excellence and Equity in Mathematics*.

(7) Common Core Standards and PA

"States Slow Standards Work Amid 'Common Core' Push" by Mary Ann Zehr

Source: *Education Week* - 11 November 2009
http://www.edweek.org/ew/articles/2009/11/11/11standards_ep.h29.html?tkn=LWLCBoXHT3Zqye807EY%2Fdg%2Bmbclf7klvEPBu

In case you were wondering, PA has halted the revision of its state standards for mathematics until the “Common Core” national standards, also supported by NCTM, are available in the very near future. For the latest on the “Common Core” standards, go to:

<http://www.corestandards.org>

Upcoming Conferences and Events:

PCTM 59th Annual Conference

R U Rdy 4 da Dglt Mth Wrld?

November 10-12, 2010

Harrisburg, PA

For more information visit: www.pctm.org.

Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools: Bridging the Gap between Research and Practice the Research to Practice

March 25, 2010

PaTTN Harrisburg, with remote sites at PaTTN King of Prussia and PaTTN Harrisburg (See the two-sheet stapled insert in this newsletter.)

NCTM Annual Conference

April 21-24, 2010

San Diego, CA

2010 NCTM Affiliate Leaders Conference

July 22-24, 2010

Reston, Virginia (in the Washington, DC suburbs)

Registration deadline: June 30, 2010

Affiliate leaders conference is open to current and potential leaders of all NCTM Affiliates. **Affiliates are encouraged to send teams of at**

least two members to maximize the benefits of the conference.

The appropriate registration fee is due at the time of registration (NCTM members- \$50, after deadline \$75; nonmembers - \$128, after deadline \$153).

More info at

<http://www.nctm.org/about/affiliates/content.aspx?id=1134>

Lesson Study Immersion Program (LSIP)

June 24 (Thursday) to July 6 (Tuesday), 2010

Japan

Provided by Global Education Resources, L.L.C. (GER)

For more info, go to

<http://www.globaledresources.com/events/2010/LSIP/>.

ELECTRONIC RESOURCES

Making Materials for Your Classroom

Need a pentagonal pyramid that's six inches tall? Or a number line that goes from 7 to 32 by 5s? Or a set of pattern blocks where all shapes have one-inch sides? You can create all these and more with the new Illuminations

Dynamic Paper tool. *Learn more at*

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=205>

Source: NCTM

SMARTBoard Mini-Movies

Enhance your SMARTBoard Notebook presentations with these mini-movies, which are simple Flash animations.

Jamie Tubbs has created mini-movies on topics including:

- Alphabet Geometry (angles, similar figures, symmetry, transformations, tessellations)
- Everything Geometry (geometry basics, circles, area and perimeter, classifying triangles, classifying quadrilaterals)
- Web-Based Student Activities
- Number Properties & Concepts
- Multiplication with Circles and Stars
- Addition and Subtraction with Dominoes
- More Grades K-2 (recognizing patterns, doubles)

<http://www.misterteacher.com/minimovies/minimovies.html>

Source: Math Forum Internet News No. 14.45 (6 Nov 09)

The Geometer's Sketchpad 5.0

The Geometer's Sketchpad® is a dynamic construction, demonstration, and exploration tool that adds a powerful dimension to the study of mathematics. You and your students can use this software program to build and investigate mathematical models, objects, figures, diagrams, and graphs.

Beyond innovations in performance and usability, such as video game-quality graphics and advanced data handling, Sketchpad 5 offers:

- Transformable Pictures
- Hot Text™
- Marker Tool
- Expanded Algebraic Capabilities
- Expanded Geometric Capabilities

- Improved Display
- Integrated Support and Curriculum

See a full list of features at <http://www.keypress.com/gsp>, as well as introductory videos and classroom materials. You can download the software for free, but until you get an authorization code it's limited to 20 minutes at a time, and cannot save, copy, or print. There is a charge for upgrading from an

earlier version; see the web page above for details.

Source: Math Forum Internet News No, 14.52 (25 Dec 09)

geometry.software.dynamic

<http://mathforum.org/kb/forum.jspa?forumID=131>

You'll find Scott Steketee, former math and computer science teacher and current Geometer's Sketchpad developer, posting on the dynamic geometry discussion, hosted by the Math Forum. This is a discussion of such geometry software programs as the Geometer's Sketchpad and Cabri Geometry II. This group talks about ways of teaching using this technology and the behavior of these programs in specific situations, and sometimes shares sketches.

Registration is free.

Source: Math Forum Internet News No, 14.52 (25 Dec 09)

Sketchpad® Lesson Link

<http://www.keypress.com/sll>

Sketchpad LessonLink is a library of activities and demonstrations for grades 3-12, aligned to textbooks, state standards, and content strands, featuring The Geometer's Sketchpad(R) software. It offers 501 activities for version 4 of

the software, with 49 currently available for the version 5 and more on the way.

LessonLink features:

- sketches
- teaching notes
- student worksheets
- tip sheets and how-to videos for Sketchpad

To see an introductory video, sign up for a free trial, or register for LessonLink as an individual or with a school or district, visit the link above. For more sample activities, and related Sketchpad tips, see this section of the Sketchpad Learning Center:

<http://learningcenter.dynamicgeometry.com/x20.xml>

Source: Math Forum Internet News No, 15.1 (1 Jan 09)

Electronic Encyclopedia of Statistical Exercises and Examples

<http://www.whfreeman.com/eesee/eesee.html>

Supplementing introductory textbooks, the Electronic Encyclopedia of Statistical Exercises and Examples (EESSE) comprises over 80 "real-world" stories or examples about the uses and abuses of statistics and statistical inference, drawn from published and printed media encompassing a wide range of subject-matter areas.

Companion materials for case studies include:

- problems
- graphics
- data sets portable to statistical software packages
- video clips

The site is a product of a National Science Foundation grant to Cornell University and The Ohio State University, currently developed with support at the latter by W.H. Freeman & Company. (I looked at a few of these, and they seemed really interesting. *Ed.*)

Source: Math Forum Internet News No. 14. 48 (27 Nov. 09)

NCTM Online Courses

E-Seminars are 60-minute, one time seminars that provide a closer look at hot topics within math education. Include a classroom full of staff for **one site fee of \$59**.

[Applying Response to Intervention \(RTI\) in Mathematics to Support ALL Learners \(General\)](#)

Date: February 9, 2009
Time: 4-5 pm, ET

[Effective Mathematics Instruction: The Role of Mathematical Tasks](#)

Date: February 24, 2010
Time: 4-5 pm, ET

Visit www.nctm.org/profdev to learn more and register.

[Making Connections \(Grades 7-12\)](#)

Date: March 1, 2010
Time: 4-5 pm, ET

E-Workshops consist of two 90-minute sessions and include 3 hours of Standards-based content. The workshops are **\$179 per site** and you can include as many participants as you like.

Visual information is delivered via the Internet while audio is delivered by phone.

Visit www.nctm.org/profdev to learn more and

register!

[Meeting the Needs of ALL Students Using Differentiated Instruction: Secondary - Grades 6-12](#)

E-Workshop Date: Monday, February 8

Follow-Up Date: March 22

Time: 4-5:30 pm, ET

[Making Mathematical Connections - Grades 9-12](#)

E-Workshop Date: Tuesday, February 23

Follow-Up Date: April 13

Time: 4-5:30 pm, ET

[Mathematics Assessment - Grades 9-12](#)

E-Workshop Date: Wednesday, March 17

Follow-Up Date: April 28

Time: 7-8:30 pm, ET

For PA teachers preparing for the Praxis II:

[Moving to Mathematics](#), a series of online courses

Source: Math Forum Internet News No, 15.1 (1 Jan 09)

(Advertisement...)

Del Rey Releases Graphing Software for Teachers

HandyGraph 2.1 Expands Capabilities for Creating Attractive Graphs

Corvallis, Oregon - August 26, 2009 -

Thousands of mathematics and science teachers use HandyGraph software to create attractive and accurate graphs. Del Rey has just released HandyGraph 2.1, incorporating improvements recommended by teachers and reinforcing the company's commitment to educators.

HandyGraph 2.1 creates customized graphs for worksheets, web pages, presentations, and tests. The innovative interface empowers users to modify the numerous details of each graph without appearing complicated. Praised by teachers for its convenience, HandyGraph graphs equations and inequalities, plots points, and creates Cartesian grids. Each resulting graph image can be saved in various file formats, for use in virtually any application.

Product History

For nine years, HandyGraph has been helping

math teachers to create educational material.

HandyGraph 1 worked within Microsoft Word to create blank graphs and number lines for tests and worksheets. HandyGraph 2 debuted as a stand-alone software application, expanding graphing features while maintaining a familiar user experience. HandyGraph 2 introduced point plotting and function graphing in addition to creating Cartesian grids.

Pricing and Availability

HandyGraph 2.1 is now available for download and purchase at www.handygraph.com. Anyone can try the graphing software free for 30 days, and single user licenses are priced at \$59. Site licenses, semester licenses, and upgrade discounts are also available.

About Del Rey

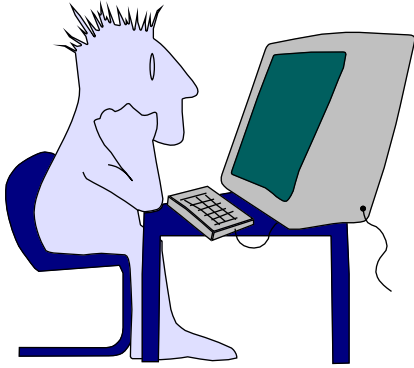
Del Rey develops software for math and science educators and for custom applications. They strive to provide high quality products and excellent customer service. The company was founded in 1999 and is headquartered in Corvallis Oregon. For more information, please visit www.handygraph.com.

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**Planning ahead?
The NCTM Annual is in Philadelphia,
April 25-28, 2012.**

Be there or B^2 !