



Math Matters

A NEWSLETTER OF THE WEST VIRGINIA COUNCIL OF TEACHERS OF MATHEMATICS

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Mathematical Getaway

The 2010 annual meeting of the West Virginia Council of Teachers of Mathematics was



held on March 19 & 20 in Flatwoods, West Virginia. The theme "Mathematical Getaway" provided a wealth of opportunities for participants to "unpack" their ideas about an "inquiry-based" approach to teaching mathematics. Steve Dellinger, conference chair, and his team decorated the registration area with trunks and vacation items which inspired participants to leave behind their usual workload and become recharged with fresh ideas. The "getaway" included sessions such as "All Aboard the Intervention Station," "Landmarks and Vistas: A Guide to Mathematical Sightseeing," and "The Hunter in the Tree: The Math of Bow Hunting." The banquet, always a highlight of the conference, featured as speaker a past president of the National Council of Teachers of Mathematics, Dr. Cathy Seeley. Dr. Seeley refers to school settings where students are excited about

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WVCTM Salutes the 2010 Award Recipients

The most prestigious award given by WVCTM is the Distinguished Service Award, presented to the individual who has done exemplary work statewide in mathematics education. The award includes a Captain's Chair with an engraved plaque, hence it is often referred to as "The Chair" Award. The 2010 recipient is Karen Mitchell, a professor of mathematics at Marshall University. Dr. Mitchell has been recognized with numerous awards, including the Marshall and Shirley Reynolds Outstanding Teacher Award, awarded by Marshall University; the West Virginia Professor of the Year, awarded by the Carnegie Foundation for the Advancement of Teaching; and in 2005 the College-Level Mathematics Teacher of the Year, awarded by WVCTM. The State Mathematics Coordinator, Lou Maynus, noted that "Karen Mitchell has



Karen Mitchel and her mother

worked to bridge the gap between K-12 mathematics education and higher education. She lends her expertise to the WV Department of Education without

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Fourth Year High School Mathematics Course

Dr. Cathy Seeley shared in a conference session her work with



Cathy Seeley

an initiative at the Charles A. Dana at the University of Texas at Austin. Many school systems are in need of a fourth mathematics course that is not designed primarily for the calculus-bound student. Such a course needs to be rigorous and relevant, a course that addresses important mathematics that has not been examined thoroughly in previous courses, a course that assumes some fluency with both algebra and geometry, and one that is a coherent part of a K-12 Mathematics program, even serving as an elective for the calculus-bound student. The course that grew from the work of the group at the Dana Center focuses on modeling, reasoning, and decision-making with a strong financial strand, project-based

learning, and use of appropriate technology. It is definitely not a remedial course that is computation-based, but emphasizes analysis of data and statistics and the decision-making that ensues. The course entitled “Advanced Mathematical Decision-Making” was piloted last year and this year is being implemented with extensive professional development to support it. Cathy’s presentation included video clips from the pilot classrooms which gave attendees an opportunity to see teachers asking good questions to further student thinking and supporting students as they took responsibility in problem solving situations.

As Cathy commented in the AMDM Newsletter, “I think back to the 1989 recommendations of mathematician Lynn Steen in the then-groundbreaking report, *Everybody Counts*. Professor Steen noted that we must find another capstone besides calculus for high school mathematics. He argued that while every student needs to study rigorous mathematics every year in school, and while calculus is an important course for many students, we need to find a more directly relevant experience for other students. I can’t help but think that Advanced Mathematical Decision-Making can be that course.”

State Level Presidential Winner Recognized

Each year the President of the United States recognizes outstanding mathematics and science teachers by honoring them with the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST). This esteemed group of highly qualified teachers has demonstrated a deep understanding of content and a unique ability to motivate and enable students to be successful. Collectively, they reflect the expertise and dedication of the teaching profession. Mathematics and science teachers from kindergarten



Cindy Burke

through 12th grade are eligible for the award. In even-numbered years, the award is given to elementary teachers (kindergarten–6th grade); in odd-numbered years, secondary teachers (grades 7–12) are recognized. The Presidential Awards are the Nation’s highest honor for teaching mathematics or science. Every year up to 108 recipients of the Presidential Awards receive the following:

- A citation signed by the President of the United States
- An opportunity to join a dynamic network of awardees.
- A \$10,000 award from the National Science Foundation.
- A paid trip for two to Washington, DC, to attend a week-long series of recognition events and professional development opportunities.
- Gifts from donors to the program from around the country.

During the banquet awards, Lou Maynus, State Mathematics Coordinator, recognized our State-Level Presidential Winner, Cindy Burke, a teacher at Sherrard Middle School in Marshall County.

Election Results 2010

The following individuals were elected to serve on the Executive Committee for WVCTM for a two-year term: **Cindy Burke**, a teacher at Sherrard Middle School in Marshall County will serve as **Historian**; **Melissa Farley**, a teacher at

University High School in Monongalia County will serve as **Vice**

President-Secondary;

Susan Barrett, a School Improvement Coordinator in Nicholas County, will serve as **Vice President-Elementary**; **Judy Pomeroy**, a math specialist for RESA IV headquartered in Summersville, WV, will serve as a **Member-at-Large**; **Dr. Jeanne Finstein**, president and director of development at Polyhedron Learning Media in Wheeling, will serve as coordinator of **Community Relations**; and **Murrel Hoover**, a professional development specialist for the Teachers Development Group headquartered in West Linn, Oregon, will serve as the **NCTM Representative**.



Studios, Data Snaps and Mathematically Productive Teaching Routines!

These terms are used to describe the current school-based professional learning community work in mathematics. So, what happens in a Mathematics Studio? Over the course of a year, a cohort of “resident” teachers, coaches, and administrators meets five times for a “studio day” in the studio teacher’s classroom to design a plan that involves the rehearsal of one or more “*mathematically productive teaching routines*,” observe the enacted plan and gather student discourse data, reflect and analyze the lesson and the student work, and finally to consider how that day’s lesson is generalizable to their own practice.

That’s where “mathematically productive teaching routines” (MPTR) come in. Deborah Ball, Megan Franke and other mathematics education researchers define MPTRs as those routines that relate to the everyday



practice of teaching mathematics and foster the development of students' mathematical reasoning, understanding, and identity. They are independent of the curriculum materials and are the routines that are most likely to open opportunities for math learning and achievement by all students. Like an artist's studio, the mathematics studio becomes the place to 'roll up one's sleeves' and try on the work of implementing these MPTRs together.

All studio work is tailored to the needs of the school and/or district. The following activities typically occur during a studio cycle.

1. One half-day of leadership coaching for the studio principal
2. One half-day of preliminary planning with the studio teacher
3. One full "studio day" per cohort of 10-12 resident teachers and administrators (number of cohort depends on district/school size and resources)

The work is initially facilitated by a Teachers Development Group consultant. Over a two or three year period, the consultant's focus shifts to providing coaching and support to local teachers, coaches, and/or principals who learn to facilitate studios and "mini-studio" sessions.

For more information, contact Murrel Hoover (murrel.hoover@teachersdg.org) or visit the Teachers Development Group website at www.teachersdg.org

2009 Presidential Awardee

Susan Naylor, our Presidential Awardee, shared some highlights from her memorable experience at the recent awards ceremony.

I was honored to represent West Virginia as the elementary recipient of the Presidential Award for Excellence in Math and Science Teaching.

The awards festivities were held in Washington, DC in January.

One of the most valuable aspects of attending national education events, is the opportunity to compare notes with teachers around the country. Part of the week I spent in Washington was devoted to giving awardees the opportunity to voice concerns from the teachers and states they represented. It was not surprising that the highest priority issue among the group concerned professional development. West Virginia is certainly not unique in its struggle to provide professional development for all the new initiatives that are currently overwhelming teachers! Secretary of Education, Arnie Duncan, spent an afternoon listening as our group expressed need for both time and money to better prepare teachers to implement new 21st Century strategies and materials. We were able to emphasize to Secretary Duncan and his staff how important it is that professional development be sustainable. Many teachers shared examples of professional development training provided in isolated settings, often "one shot" introductions, but without support to follow the teachers back into their classrooms. As a result, there was little impact on actual classroom instruction. I was impressed that Secretary Duncan listened intently to the teachers who spoke, asked follow-up questions, and even took notes. I remember thinking to myself, "Here we are, practicing, "in the trenches" teachers, being given a chance to share our concerns **directly** to someone who can make a difference, from the top down, across the country!" It was a very empowering moment. And



Susan Naylor

the fact that teachers from all across the country were echoing each other with their comments united us into one emphatic voice.

The most memorable moment of my trip was also my most embarrassing! There were over 80 teachers in our group of science and math awardees, many of the same generation as myself. The multiple Susans, Lindas and Debbies were hard to keep track of. To make it easier we began referring to each other by state name, rather than personal names. For the week I was there, I became "West Virginia". On the day we visited the White House and were being assembled for our photograph with the President, I realized I would be standing right beside him. When he came over to take his place for the photo, my knees got weak and my heart started racing. When President Obama turned to ask my name, my mind went absolutely blank. I fumbled for the words but all that came out was "West Virginia, West Virginia!". All the teachers around us started laughing, recognizing the inside joke!

Opportunities to take part in the development of educational policies are becoming more available to teachers, as the educational community gets smaller through the use of email, the internet and video conferencing. State-to-state communications are becoming just as common as county-to-county communications have been in the past. Strong support for nationalizing standards was expressed by many teachers while I was in Washington. It can't be long before educational issues and policies become global! Taking advantage of opportunities to be involved in professional meetings and conferences is a powerful way to partner with other teachers to guarantee that our voices ARE heard, as classrooms and instruction continue to evolve around our country and around the world.

2010 Poster Contest Winners

	K - 2	3 - 5	Middle School	High School	College
1st	Julee Bartram Central City Elementary, Cabell County (Jill Farley)	Mathew Hong West Teays Elementary, Putnam County (Tootie Black)	Hattie Dove Romney Middle School, Hampshire County (Donna Davis)	Ruth Luo University High School, Monongalia County (Sean Freeland)	Joseph Ward Bethany College (Mary Ellen Komorowski)
2nd	Connor Aboytes Whitesville Elementary, Boone County (Sue Beller)	Maranda Pate West Teays Elementary, Putnam County (Tene Bancroft)	Madison Manly Pendleton County Middle School, Pendleton County (Sheila Ruddle)	Kaylea Blackshire Fairmont High School, Marion County (Suzie White)	John Tritschler Bethany College (Mary Ellen Komorowski)
3rd	Johnnie Wilson Central City Elementary, Cabell County (Carolyn Frye)	Madelyn Holbrook Central City Elementary, Cabel County (Linda Frye)	Bridgitte Coffman Moorefield Middle School Hardy County (Michelle Pillar)	Kara Seaman Univerity High School, Monongalia County (Holly Plunkett)	Tanner Coles Bethany College (Mary Ellen Komorowski)

WVSTA MEETING

The West Virginia Science Teachers Association (WVSTA) has extended an invitation to the membership of WVCTM to attend their annual conference at Oglebay Resort in Wheeling, WV on October 21 – 23. This year’s conference theme “Bringing Science to Life” will be highlighted by keynote speaker, Greg Marshall. An inventor, scientist, and filmmaker, Marshall is an Emmy Award winner for cinematography and sound for two National Geographic specials. More information can be obtained at <http://www.wvnet.edu/wvsta/>

WVCTM Awards and Grants Opportunities

- Golden Holtan Grants
- Walter E. Regula Teacher-in-Training Grant
- Mathematics Teacher of the Year Award (College, High School, Middle/Junior High, and Elementary School)

- Distinguished Service Award “The Chair”

Forms for each of these can be downloaded at www.wvctm.org. Deadline for application of all grants and awards is February 1, 2011. Winners will be announced at the WVCTM banquet on Friday, March 18, 2011.

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pursuing the study of mathematics as “pockets of wonderfulness.” WVCTM members experienced a “pocket of wonderfulness” both in a conference session and in the banquet presentation as Dr. Seeley shared her experiences and insights as an active participant in evoking change in mathematics education for more than a quarter of a century. Her life’s work has included serving for eight years as Director of Mathematics for the Texas State Department of Education, as a teacher of mathematics in Burkina Faso, Africa as a Peace Corps volunteer, as a member of the writing team for the 1989 Curriculum and Evaluation Standards for School Mathematics, and currently as a member of the staff of the Charles A. Dana Center, which impacts

state and national policy decisions to improve mathematics education. Banquet attendees received a complimentary copy of Dr. Seeley’s 2009 book *Faster Isn’t Smarter—Messages About Math, Teaching and Learning in the 21st Century*, which offers common sense insights into important issues in mathematics education.

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reservation. Her legacy is the positive effects that her work has had on West Virginia teachers and students of mathematics.” She has contributed to many initiatives, including Project MERIT and several MSP grants. A colleague added, “Karen has loved mathematics since she was a child growing up in Huntington. She doesn’t consider her job work; she says it’s a privilege to be able to teach.” Mrs. Ruth Mitchell, Dr. Mitchell’s mother, surprised her daughter by traveling to the conference to share this notable award.

WVCTM Mathematics Teachers of the Year are those who exemplify the highest standards of mathematics

teaching and provide a role model for their colleagues.

Gary Seldomridge was recognized as the 2010 College Mathematics Teacher of the Year. Gary has a bachelors degree in mathematics from Davis and Elkins College, and a masters degree and Ph. D. in mathematics from WVU. He is currently a professor of mathematics at Potomac State College



Gary Seldomridge

of West Virginia University. He is a member of numerous professional organizations, and has presented at many of the conferences sponsored by these organizations. He served as the first director of the Governor's School for Mathematics and Science, a summer residential program providing academic enrichment for middle school students. He is currently serving as the co-chair of the State Calculator Usage Group. Most notable is his development of EasiWord, a program to allow mathematics symbols, equations, and drawings to be easily inserted into Microsoft Word. As a member of the PSC faculty, he has served on many committees, and as PSC Faculty Assembly Chair. The current assembly chair wrote, Dr. Seldomridge is known throughout the campus and local community for his excellence in math instruction. He is highly respected by students, fellow faculty, parents, and local industry leaders for his knowledge and expertise. Yet, his greatest strength is not found in a meeting or even in a large group setting – it is most notable when he is tutoring, assisting, or even mentoring individual students in the personal setting." A colleague writes, "He does more than teach. As a faculty member, he willingly serves on search committees, including two presidential search committees, and is an active

participant in activities of the college. He leads by example, never showing impatience or frustration." A student adds, "He is one of the most passionate teachers I have ever had, and he will help any student who seeks assistance. He has inspired many students, including myself, to pursue careers in mathematics." Gary is a teacher who knew long before the 21st Century what an inquiry-based classroom should look like, and continually has challenged his students to think more deeply.



Neil Reger

Neil Reger was recognized as the 2010 High School Mathematics Teacher of the Year. Neil is currently a mathematics teacher at Buckhannon-Upshur High School. He has a bachelors degree in mathematics from Glenville State College and a Master of Science degree in mathematics from WVU. He is also a National Board Certified Teacher of Mathematics. The State Mathematics Coordinator, Lou Maynus, described him as "a self-motivated and conscientious individual. The West Virginia Department of Education, K-12 students in West Virginia, and I are fortunate to have his passion and expertise." He has recently presented TechSteps sessions to high school mathematics teachers throughout the state, served as a project director for several Project-Based Learning efforts, and has played a significant role in shaping the Summer Leadership Institutes. A video clip of his classroom, engaging in a PBL that he authored, is available at the WVDE

website under Model Classrooms of Mathematics. In addition, he has long been regarded as a "computer guru" at his high school, as well as throughout the state. He has served as a national grader of AP Computer exams for many years. A colleague states, "His involvement in the West Virginia mathematics community has had a positive impact on student achievement throughout the state." Another colleague adds, "Neil continually strives to improve his practice through his own professional development and through working with students and other teachers." Neil serves as a model for his students demonstrating his love of his content, his willingness to work hard, and his ability to think creatively to unravel mysteries. It is certainly evident that students live with technology; Neil has demonstrated the ways that they can learn with technology. He has given them the tools they need to inquire and inspires them to continue the exploration for themselves.

Sheila Ruddle was recognized as the 2010 Middle School Mathematics Teacher of the Year. Sheila holds bachelors and masters degrees from Marshall University and National Board



Sheila Ruddle and Family

Certification. She is a member of the State Cadre of the WV Department of Education Mathematics Task Force and the staff of the WVDE Teacher Leadership Institute. She is also a textbook design advisor for Glencoe McGraw-Hill publishers. Sheila has attended numerous conferences and institutes, both as a participant and a presenter. These experiences have provided a new lens from which she can view her classroom and has allowed her

to think through ideas about learning, teaching, assessment, and mathematics content that underlie the decisions that that caused changes in her own practice.

Her nomination included the following statements from a colleague, "Sheila is a reflective professional who communicates effectively, actively listens to others, and makes instructional decisions based on student learning needs. [She has developed] real-world problem situations that are designed to both motivate and advance student learning." A supervisor wrote, "Sheila is the cornerstone for standards-based mathematics instruction... and provides impeccable advice and information for establishing our county's mathematics goals...She crafts her instruction towards 'making students think.' She is a role model and leader for all teachers." A parent added, "My children enjoyed her sense of humor, her attention to detail, and the well-organized classroom structure. They were constantly challenged to 'think outside the box'." Sheila's original and creative ideas, coupled with her energy and enthusiasm, have earned her a reputation as a dynamic teacher, who pushes her students and her colleagues to continually do their best and challenge themselves.

Dana Yokum was recognized as the 2010 Elementary School Mathematics Teacher of the Year. Dana is currently a fourth grade teacher at Franklin Elementary School in Pendleton County. She has served as a school technology coordinator and member of the county textbook committee and RESA VIII Mathematics Program review team. She has written Teach 21 instructional guides for Grade Three and regularly uses standards-based instruction in the classroom.

Her nomination included the following statement from a supervisor, "Dana is the classic nourishing elementary teacher that every parent wants their child to experience. She mothers, encourages, attentively listens and constantly uplifts downtrodden spirits. Dana thrives on challenges and is a lifelong learner." A parent wrote, "She truly has a special gift of teaching and making her students feel important." And a former student added, "If we didn't understand she would sit down and explain. Mrs. Yokum helped me not only through math but by how much she cared."

In addition to these awards, WVCTM also presents grants to both deserving practicing teachers and pre-service teachers. This year Opequon Elementary School (Berkeley County) teachers, Andi Hasley and Kristin Shriver, received a Golden Holtan Grant to facilitate their project entitled "Using Music to Teach Mathematics." In addition, Berkeley Heights Elementary School (Berkeley County) teachers, Bethany Miller and Shannon Stephens received a Golden Holtan Grant to facilitate their project entitled "Math Fact Matchup." Sheila Ruddle, a mathematics teacher from Pendleton County, presented the Walter Regula Mathematics Teacher-in-Training Grant to Laurel Beatty, a student at West



Dana Yokum

Virginia University and a Pendleton County native. This award is given in honor of Walter Regula, Shelia's father, who was a mathematics education professor at Marshall University and who also served as president of WVCTM. The \$600 award is made annually to an outstanding college or university student who is training to become a mathematics teacher.

WVCTM Executive Committee

- President Rowanne Shockey
- President Elect Cheryl Reger
- VP College Susan Goodwin
- VP High School Melissa Kuhl
- VP Middle/Jr. Hi. Sheila Ruddle
- VP Elementary Sheila Pell
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- Community Relations Jeanne Finstein
- Member-at-Large Holly Plunkett
- Member-at-Large Peggy Baldwin
- Newsletter Debbie Seldomridge and..... Gary Seldomridge
- President Math Field Day Judy Pomeroy
- Student Symposium Mike Mays
- WV Math Coordinator Lou Maynus
- WV Title I Math Coordinator John Ford



Coming Events

WVCTM Executive Meeting

Flatwoods, WV
June 19, 2010

WVCTM Annual Meeting

"Math Safari"
Flatwoods, WV
March 18 - 19, 2011

Regional NCTM Conference

Baltimore, MD
October 14 - 15, 2010

**NCTM Annual Meeting
"Geometry: Constructing and Transforming Perspectives"**

Indianapolis, IN
April 13 - 16, 2011