President’s Greetings

Hello Mathematics Educators,

Wow, I don’t know about you, but for me the summer simply flew by. By now everyone is deep into the new school year, so don’t forget to register for the upcoming SCCTM conference. This year’s theme is “Charting a Course for the Future” and is already sure to be a crowd pleaser. Volunteers are still needed. If you can help out in Myrtle Beach, be sure to use our Contact Form to let us know how you can be of help. Extra hands are always needed in registration and in the SCCTM booth. Information about the Fall Conference may be found on the SCCTM website. Registrations are already coming in. Be sure to book your hotel room and mention that you want the SCCTM Conference rate to get the conference price. We’ll look forward to seeing you in Myrtle Beach October 11 – 12, 2012,

Cindy Parker

Upcoming SCCTM Conferences

2012 Myrtle Beach
2013 Greenville
2014 Myrtle Beach
Clemson Student Council
of Teachers of Mathematics

The Clemson University Student Council of Teacher of Mathematics organization was formed in October 2011 and was officially recognized by the National Council of Teachers of Mathematics in February 2012. The CUSCTM was recognized in April 2011 by Omicron Delta Kappa — a Leadership Honor, with a $500 check and a plaque for Academic Achievement. The student leaders of this new NCTM affiliate are already being recognized for their leadership and hard work. CUSCTM members plan to use the award money to travel to conferences during the upcoming school year. CUSCTM rising juniors and seniors are already excited about having an opportunity to attend the 2012 SCCTM conference. CUSCTM has the honor of being the first NCTM student affiliate organization in the state of South Carolina. The SCCTM board looks forward to other student affiliate organizations forming across the Palmetto state. E-mail Cindy Parker: scctmpresident@gmail.com to request a letter of sponsorship.

Visit CUSCTM online at:
http://www.clemson.edu/hehd/departments/education/academics/organizations

President: Olivia McNeil

Vice President, NCTM Representative: Kylie Paige

Treasurer: Erica Holcombe

Community Relations: Ashley Estes

Executive Secretary: Sarah Rochester

Faculty Advisor: Leigh Haltiwanger
Puzzles and Mathematics

Rubik’s Cube

Puzzles encourage problem solving brain activity. Curiosity and a desire to figure things out are good motivators for math students, right? Here are a few references to puzzles that may not be new but are experiencing revival and/or new applications.


Sudoku

Mathematics of Sudoku Leads To "Richter Scale" of Puzzle Hardness from The Physics ARXIV Blog on August 6, 2012

"The global fascination with Sudoku has led to a sudden interest in the mathematical properties of the puzzle. In the last few months on this blog, we've looked at how mathematicians have solved the minimum Sudoku problem and even how they've used the mathematics of Sudoku to encrypt images." To read more go to: http://www.technologyreview.com/view/428729/mathematics-of-sudoku-leads-to richter-scale-of/

Please “like” SCCTM on facebook!

How are you Charting a Course for the Future? Please share your thoughts and resources with other math teachers. You are invited to post your comments, questions, and experiences on the SCCTM facebook page. If you don’t have a facebook account (yet) and have you have any ideas about how SCCTM can assist you, just send an email to SCCTMProgram@aol.com. Help SCCTM help you.
Opportunities for the future in STEM careers are growing and GROWING AND GROWING!

"There is a significant gap between the kind of graduates the U.S. is producing and what the American economy needs today and in the future," said officials at the Partnership for A New American Economy, in a statement. "U.S. companies are hungry for talent with degrees in STEM and these jobs are increasing three times faster than jobs in the rest of the economy. However, these positions are the hardest to fill because of the dearth of native-born Americans with these degrees." Paul McDougall, InformationWeek May 23, 2012, Debra Auerbach, AOL Jobs Contributor posted April 9, 2012 her list of the top STEM jobs in demand in 2012 are Civil Engineers, Medical Scientists, and Environmental Engineers with mathematics listed as a top skills requirements.

How are math educators meeting these challenges? What do you need to meet these challenges? Are you interested in finding Professional Development and other opportunities in this area? A few online resources are listed below.

Siemens STEM - Webinars
SC STEM Learning Group
SC STEM SUMMIT 2012 - Eventbrite

Useful Weblinks

Get the Math

How does math get used in the "real world?" The short answer is that it’s used to create hip-hop music, in fashion design, and through a wide variety of other interesting ways. Get the Math is an interactive website that combines video and web interactivity to help students develop algebraic thinking skills for solving real-world problem situations. Get the Math is funded by The Moody's Foundation, along with assistance from WNET and American Public Television. On the site you will find sections labeled The Challenges, Video, and Teachers. In The Challenges area there are video segments profiling various professionals who use math in their work, along with interactive tools to help students solve the challenges presented to them. The Teacher area includes resources for teachers, such as a training
video showing how to use project materials in the classroom, along with
student handouts. Everyone should try out the Basketball challenge,
featuring NBA player Elton Brand as he explains the math problems
encountered when free throw shooting. Try out Get the Math at:
http://www.thirteen.org/get-the-math/

- Bottle Cap Answer Keepers:
- Secret Number - Students work in pairs or groups, keeping their number
  covered with a sticky note
  https://docs.google.com/file/d/0BwNLh47Up8pHbzVKc0FhR2ZNQ00/edit?pli=1
- Little Bird Blog – Create a personalized digital book
- Story Bird http://storybird.com/ Create a personalized digital book
- Currclick.com http://www.currclick.com/ Use the search term “free” to
  find lots of free downloadable resources.
- Share My Lesson http://www.sharemylesson.com/teaching-resources/
- Grockit recently unveiled iPhone and iPad applications for Learnist, its
  platform for educators, which resembles the social media website
  Pinterest. Already, the site is home to about 20,000 resources for
  educators, including videos, blogs and images -- known as "learnings."
  The new apps will allow users to create and view content.
  https://grockit.com/

Common Core State Standards

A main focus for upcoming professional development for most math
educators will be the Common Core State Standards. 2012 - 2013 will be
another transition year for the implementation phase of CCSS in South
Carolina. When math educators get together the conversation inevitably
turns to CCSS.

There was an article in the August 23, 2012 Education Week titled Consortia
Provide Preview of Common Assessments by Catherine Gewertz who states.
"As teachers begin shaping lessons for the common standards, many are
wondering how to prepare their students for tests that won’t be ready for at
least two years. But sample items being drafted for those exams offer early
ideas of what lies ahead." Under the subheading "Building Fluency" in the
article a sample math performance task is discussed. "A sample math
performance task by Smarter Balanced asks 6th graders to figure out what they need to build a community garden to a given set of specifications for $450.

During two test sessions totaling up to two hours, students would have to calculate many figures, including the perimeter, surface areas, and volume of each section of the garden, and make a sketch based on their calculations. They must figure out how much wood and soil are needed and how many tomato and carrot plants to buy, given their cost, the garden’s size, and each plant’s need for space. Finally, they must show how their project will stay within its allotted budget."

Other Smarter Balanced documents, posted on the Missouri Department of Education website, cover all other grade levels in both math and English/language arts. Read more at: http://www.edweek.org.

**CCSS Resources**

**South Carolina State Department of Education Support Site**

**Smarter Balanced Assessment Consortium**

Common Core State Standards Tools & Resources | Smarter Balanced Assessment Consortium including the Common Core State Standards for Mathematics (pdf)

http://corestandards.org/assets/CCSSI_Math%20Standards.pdf

**Free Algebra I Courses Addressing Common Core Requirements**

Free algebra course helps teachers address Common Core requirements from an eSchool News article on August 15, 2012

"SAS Curriculum Pathways has launched a free Algebra 1 course that provides teachers and students with all the required content to address the Common Core State Standards for Algebra." Go here for more information: Free algebra course helps teachers address Common Core requirements.

**High School Math Contest**

Chance for your student and math department to win up to $5000!

The American Mathematical Society is conducting a national contest for high school students (roughly 9th grade and above, but anyone can take the test), Who Wants to Be a Mathematician, with a top prize of $5000 for the winning student and $5000 for the math department of that student's
school. There is no fee to participate.

- **When/where:** The 2013 contest will take place Thursday, January 10, from 9:30 to 11:00 a.m. at the Convention Center in San Diego. The event is part of the Joint Mathematics Meetings, which take place January 9-12, 2013.

- **Travel:** The AMS will reimburse reasonable travel expenses and room and board for each contestant and a parent/guardian for a maximum of two nights. Contestants and their parent(s)/guardian(s) are welcome to attend other events at the meeting.

- **Qualifying:** Contestants are chosen based on their scores on a qualifying test, administered by teachers (or in the case of home-schooled students, by whomever does the teaching at home).

- **Request a qualifying test by emailing the AMS Public Awareness Office, paoffice@ams.org, with the subject line "2013 national contest." In the body of the message, include your name, school, contact information, and courses taught this year.

- **Deadline for receipt of tests is Wednesday, Oct. 17. The AMS will select 10 contestants from different regions of the US and will notify those qualifiers beginning Friday, Oct. 19.**

- **Contest format:** There will be two semifinal games, each with five of the contestants. The winners of the two semifinals will go "head-to-head" in the finals for the national championship. The champion will win $5000 for himself or herself, $5000 for your math department, a traveling trophy for you to display at the school until the 2014 contest, a trophy for the school/department to keep, and an individual trophy for the winner to keep. All contestants will win prizes, cash for themselves, and cash for your department (the minimum cash prize is $500 for the student and $500 for the department).

See more about the contest at:
http://www.ams.org/programs/students/wwtbam/wwtbamnational
SCCTM 2012 Elections

The South Carolina Council of Teachers of Mathematics holds elections each year. A President-Elect is elected every year with the winner holding an office for three years. During the first year this candidate serves as President Elect, in the second year of office as President, and during the third year as Past President and Conference Chair. Vice Presidents, Secretary, and NCTM (National Council of Teachers of Mathematics) Representatives are elected for two year terms and may run for a second term, serving a maximum of four consecutive years. This year, our members must select a Secretary, NCTM Representative, Elementary Vice President, and Secondary Vice President.

Candidates for the office of Secretary

Maria Faulkner

A member of SCCTM and PSTA, Maria Faulkner is from Cheraw in Chesterfield County. Maria is running for the office of SCCTM Secretary. She has been a middle school mathematics teacher for over seven years. Maria teaches 7th and 8th grade. Prior to teaching middle school, she taught elementary school for three years. Maria holds a Bachelor’s degree in Elementary Education from Coker College and Masters Degree in Instructional Accommodation from Francis Marion University. She regularly attends SCCTM conferences and says that she would like to serve the organization because, “I have been a member of SCCTM for many years and have received a lot of help from the math conferences on how to teach middle school math. I now want to give back to this great organization and help in any way possible”. 
Suzanne Peterson

A National Board Certified Teacher, Suzanne Peterson of Lexington is running for the office of secretary. She has taught in Lexington School District One since 2000 where she currently teaches 8th grade Pre-Algebra and Algebra I HN and previously taught 5th and 7th grade mathematics. Prior to her position in Lexington County, Suzanne taught for two years in the Richland One District and for four years in the Colleton County School District. She has served as Team Leader and RTI Math Instructor at her school and is trained as an ADEPT/SAFE-T evaluator. She serves on the District Secondary Mathematics Curriculum Council, on the Positive Behavior Interventions and Support (PBIS) team, was on the Algebra I textbook adoption committee, served as United Way Chairperson. In 2009, Suzanne was a Pearson National Board Portfolio Evaluator for Early Adolescence Mathematics. She holds a B.S. in German and International Business from Penn State University and a M.Ed. in Teaching from University of South Carolina. She earned National Board Certification in Early Adolescence Mathematics in 2008. Her professional organization affiliations include:

National Council of Teachers of Mathematics
- Article and Resource book evaluator
- Product Reviewer

South Carolina Council of Teachers of Mathematics
- SCCTM Secretary 2010 - 2012
- Advisory Council 2009-2013
- Published in MathMate, May 2009

South Carolina Middle School Association
Pine Grove School – Human Rights Committee Chairperson (2011 – present)

Suzanne wishes to continue her service to SCCTM and says, “Math has always been a passion for me. I enjoy promoting mathematics education with those presently in the profession as well as future teachers. As a professional, I have always felt that
it was my responsibility to remain current on all matters pertaining to education. As Secretary for the past two years, I have enjoyed being an active part of SCCTM and being able to promote mathematics.”

Candidates for the office of
NCTM Representative

Michelle Snyder

Michelle A. Snyder of Sumter School District is running for the office of NCTM Representative. She teaches 6th and 7th grade mathematics at Alice Drive Middle School, is the Beta Club sponsor, Relay for Life chairperson, and serves on the school district’s Common Core implementation team. She has presented at the several SCCTM conferences and for Sumter School District inservices. She holds a Bachelor’s degree in elementary education from the University of South Carolina Upstate, Master’s degree in early childhood education, Gifted and Talented Endorsement, and is currently a NBPTS candidate. She is a member of SCCTM, NCTM, and Palmetto State Teachers Association. Michelle hopes to be elected to office on the SCCTM board and says, I believe it is vital for teachers to be active members of professional organizations. Participating in SCCTM and NCTM helps teachers to be advocates for their profession and their students. In addition, these organizations help teachers improve their content knowledge, share their expertise with others, and serve as a place for teachers to stay connected with the latest information regarding teaching and mathematics.

Sandy Powers

Sandra Powers of Mt. Pleasant is running for the office of NCTM Representative. Sandy has taught grades 6-12 mathematics;
was tenured and is now emeritus college mathematics professor at College of Charleston. She served as Undergraduate Dean and associate vice president at the College of Charleston. She is now retired and working part time teaching online for Piedmont Technical College and College of Charleston. She holds a BS in mathematics and French and a MS in Mathematics. Sandy is a member of NCTM and SCCTM and was a member of other educational organizations but says that her memberships have lapsed since retirement. She says that “SCCTM is, and has been since its origin, of importance to me. I have served as an officer in past years multiple times. I have had a long break now and would welcome an opportunity to serve with other professionals who care about SC mathematics education as I do.”

Candidates for the office of
Elementary Schools
Vice President

Joyce Moon

Joyce Moon of Summerville is a candidate for the office of Elementary Vice President. She is certified in Early Childhood Education; Elementary Education; and Instrumental Music, K-12. She holds a B.A. in Instrumental Music and an M. Ed. in Elementary Education, and has earned >30 hours with a concentration in Early Childhood. She is National Board Certified as an Early Childhood Generalist. Joyce has served as NCTM Representative on the SCCTM Board for 4 years; was Workshop Support Co-
Chair for the NCTM Regional in Charleston, SC; and has served as her school’s lead math teacher for 12 years. She is a member South Carolina Council of Teachers of Mathematics and the National Council of Teachers of Mathematics. Joyce says, “I have served on the SCCTM Board for the past 4 years and would like to have the opportunity to continue working toward furthering mathematics for our students nationally as well as in our great state.”

**Patricia Christmas**

Patricia Christmas of Sumter has been nominated for the office of Elementary Vice President. Pat has worked as an educator in Sumter County for over 19 years. She has taught at both the elementary and middle school level. For six years, she served as the math coach at High Hills Elementary School where she now serves as the curriculum coach. She earned a B.S in Elementary Education from Francis Marion University, a Master’s in Technology in Education from Lesley University, and a Master’s in Educational Leadership from University of South Carolina. She completed a three year program for Math Coaches through MSU (now S2mart Center). Pat is a member of SCCTM, and PTSA. She serves as a member of the Sumter School District Common Core Black Belt Team and the Sumter School District Common Core Implementation Team (DIT). She is also a member of Sisters in Service a local group of teachers committed to seeking out community needs and helping meet those needs. Pat would like to serve on the SCCTM board and says, "Most educators only think of the SCCTM as a “once a year conference opportunity”. I would like to promote an increased awareness of the SCCTM as a constant resource for math teachers."
Candidates for the office of Secondary Schools Vice President

Amanda McKee

Amanda McKee of Johnsonville is an Algebra and Geometry Teacher as Johnsonville High School. She has taught Middle School Mathematics including Pre-Algebra, Algebra 1, 7th grade, and 8th grade. She is Math Department Chairperson, has served on the Presidential Math Awardee Nominating Committee, is National Board Certified, and was Presidential Math Awardee for South Carolina 2007, and was a Finalist for State Teacher of the Year in 2010. She holds a BS in Math Education and has an MS in Curriculum and Instruction. Amanda is a member of SC Teachers of Excellence, the CERRA Advisory Board, SCCTM member, and is the current Secondary Schools Vice President. Amanda wishes to continue to serve on the SCCTM Board and says, “Working with the mathematics teachers in South Carolina is an important job. It is our teachers that create opportunities for students to learn and succeed. I would appreciate the opportunity to assist in the professional development that will help our great teachers continue the excellence that they have already begun.”
Charles Kelly Howard of Anderson has been nominated as a candidate for the office of Secondary Vice President. From 1990 to 1992, C.K. served the Greenville County School System as a Substitute Teacher. From 1992-1996 he worked for the Procter and Gamble Manufacturing Company as a Technician. In 1997 he taught in Algebra and Math for the Technologies in Anderson District 5 and from 1997 to the present, he has been a Math Instructor in the Greenville County School District. In 2005, he became an adjunct instructor at Clemson University, teaching Educational Psychology to undergraduates. He is a National Board of Certified Teacher AYA Mathematics, 2002, 2011.

C.K. has served as his school’s Mathematics Department Chair from 2008 to the present. He has served on various leadership teams such as the Faculty Council and Data Team and has served as a Mentor Teacher to new professionals. He became a Learning Focused certified trainer for mathematics teachers in 2006 and became a Certified International Baccalaureate teacher in 2004. C.K. has also trained and mentored student teachers from various institutions and trained teachers in various subjects including technology and MS office applications. He became a Mathematics for the Technologies Certified Teacher in 1997.

In 1989 C.K. earned a Bachelor of Arts Degree in Mathematical Sciences with a Minor in Economics from Clemson University. In 1996 he earned his Earned Master’s Degree in Secondary Mathematics Education from Converse College. He received a Doctorate in Curriculum and Instruction in Secondary Mathematics Education from Clemson in 2009.

C.K. has been member of the National Council of Teachers of Mathematics since 2002. He has been a member of the Greenville County Council of Teachers of Mathematics since 1997 and of the South Carolina Council of Teachers of Mathematics since 2004. He became a member of the Oconee Anderson
Pickens Council of Teachers of Mathematics in 1996 and has attended and presented in various professional arenas such as the SCCTM annual conference. C.K. says, “After being a part of SCCTM for many years and presenting at many of its conferences, I have personally witnessed the positive influences that the organization has had on the educators and students of South Carolina. Being a part of this influence has been a wonderful learning experience for me. To obtain a leadership position in SCCTM and to extend the influence I have on others and to learn more myself is an exciting opportunity that I would love to have.”

Candidates for the office of President Elect

Gina Dunn

Gina Dunn of Greenwood is a candidate for the office of President Elect. Her teaching experience includes seven years as a teacher of mathematics at Emerald High School in Greenwood, SC. While in this position she taught a variety of courses ranging from Pre-Algebra and Mathematics for the Technologies to Pre-Calculus and Trigonometry. During her years as a high school teacher, she also served as an adjunct instructor for Piedmont Technical College and Lander University. She is currently chair of the Department of Mathematics and Computing and is a tenured Assistant Professor of Mathematics at Lander University, where she is the liaison between the College of Sciences and Mathematics and the College of Education. As the Program Coordinator for Secondary Mathematics Education at Lander, she is responsible for evaluating the program for NCATE. She also serves on several committees at Lander including Study Abroad, the Teacher Preparation Assessment
subcommittee, Teacher Accountability and Assessment, and the Teacher Preparation Executive Committee. In addition, Ms. Dunn teaches all the Secondary and Elementary Mathematics Education courses at Lander. She also teaches General Education Mathematics courses and has implemented many innovations in those courses, including the creation of a highly successful and popular version which meets five days a week.

Gina mentors new faculty in the mathematics department and participates in their evaluation and reappointment process. She is the advisor for the secondary mathematics education students; and arranges their Clinical Practice opportunities, spending many hours in the field evaluating and mentoring student teachers.

She holds a Bachelor of Science in Mathematics from Lander University in 1994, a Master of Education in Secondary Mathematics Education from Converse College in 1997, and an ABD in Curriculum and Instruction at Clemson University. She is currently pursuing a Masters of Education in Teaching and Learning with an emphasis in Instructional Technology at Lander University

Gina is a member of:
South Carolina Council of Teachers of Mathematics
National Council of Teachers of Mathematics
Mathematics Association of America
Palmetto State Teachers’ Association

Gina says, “I have been an active member of SCCTM since the beginning of her teaching career. I have participated in the SCCTM Fall conference as a speaker since 2005. Many of my sessions and workshops at SCCTM have centered on fractions, since I have a desire to find innovative ways to present them to students. I have served on the Advisory Assembly as the Post-Secondary representative. After rotating off of the Advisory Assembly, I have been seeking more opportunities to give back to SCCTM. I feel that serving on the Executive Board as the Vice-President of Post-secondary would enable me to help promote and support SCCTM.”
Jennifer Wilson

Jennifer Wilson of Anderson has been nominated as President Elect. She has 19+ years experience in education and currently serves as a 6th grade math teacher at McCants Middle School. She has been a 5th grade teacher at Midway Elementary School, a 4th/5th grade teacher at South Fant Elementary School, a 5th grade teacher at Pendleton Elementary School, a 5th grade teacher at Mary Ford Elementary School, and an EMD-SC teacher at North Charleston Elementary School. She is a Middle Childhood Generalist, National Board Certified Teacher: 2002, 2010, and was a State Semi-finalist, PAEMST in 2012. She has been a presenter at SCCTM Conferences, a presenter for Anderson County School District Five Summer Institute, and has served on the Approved Curriculum Revision committee member for Anderson School District Five.

Jennifer holds a BA in Elementary Education from USC-Coastal Carolina College, a Masters Degree in School Leadership and Supervision from Furman University, and is holds Gifted and Talented Endorsement. She is a member of SCCTM and PTO. Jennifer says, “I have been a longtime member of the SCCTM. For years, I have enjoyed attending and presenting at the conference. My teaching skills have improved due to learning the best practices and strategies of other math teachers. I have first-hand knowledge of what an outstanding organization the SCCTM is. I enjoy what the organization represents: quality educators of mathematics ensuring the best education for the students in our state. I would like to be the president of such an organization. The opportunity to lead such a wonderful group of educators would truly be an honor.”

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