

NOTE FROM THE DIRECTOR

Despite the continuing bad economy, we are pleased with what the Math and Science Education Center is able to accomplish. You have seen in this newsletter that we have a number of professional development opportunities in math and science due to funding from various sources. We have been fortunate to participate in a number of grants that have provided funds to make these opportunities available. As school systems continue to experience budget problems, obtaining funds to conduct professional development activities has become even more important than usual.

We are also fortunate to have funding to continue the programs in the schools as well as provide on-campus programs in math and science for visiting school groups. Family Math and Family Science Nights are especially popular, and we are able to accommodate most of the requests for these programs. If you requested one of these programs that we were unable to bring to your school, be sure to put in your request early so that you will not miss out on this opportunity. As always, there are a number of center resources that teachers may take advantage of at no cost, such as materials that may be checked out from the math and science resource rooms and fossils from the fossiliferous grit pile behind the Broyhill Inn and Conference Center.

Phil Johnson

DATES TO REMEMBER

**April 21-24:** NCTM Annual Meeting and Exposition, San Diego, CA

**May 6, 13, 20:** Thursday Night Science Seminars in Astronomy

**June 21-23:** Water Workshop for MSP Group

**June 21-25:** SITE: Algebra and SITE: Geometry

**June 28 – July 2:** Integrating Middle School Mathematics and Teaching North Carolina Math B/C

**July 12-15:** Math Camp

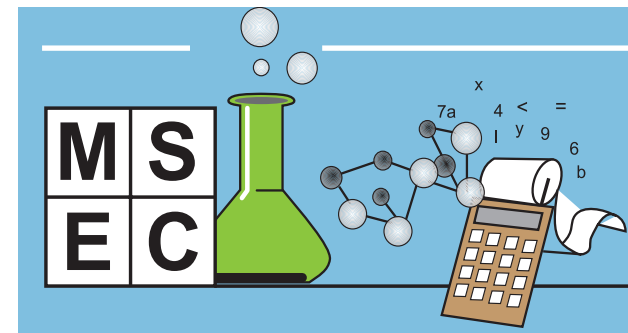
**July 12-16:** Purposeful Pedagogy

**July 12-30:** Project SMILE

**October 28-29:** NCCTM State Mathematics Conference, Greensboro

**November 11-12:** NCSTA Annual Professional Development Institute, Greensboro

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Spring 2010

# Appalachian State University MATHEMATICS & SCIENCE EDUCATION CENTER



## NC-MSEN SITE and MELT Programs

The North Carolina Mathematics and Science Education Network Statewide Institute for Teaching Excellence (NC-MSEN SITE) Program will offer two mathematics institutes on the ASU campus during summer 2010, one in algebra and one in geometry. SITE: Algebra was piloted at ASU last summer and will be offered at ASU and three other centers during summer 2010. The SITE mathematics courses are offered in cooperation with Appalachian's Mathematics Education Leadership Training (MELT) Program. Other on-campus MELT institutes are Integrating Middle School Mathematics, Teaching North Carolina Math B/C, and Purposeful Pedagogy. Off-campus offerings in the MELT program are Integrated Math in Burke County and Preparing to Teach for Math A Exams in Enka. The MELT Institutes are open to all high school mathematics teachers, two-year college mathematics faculty and to middle school mathematics teachers who have a strong background in mathematics. Location: Walker Hall; Credits: 3 license renewal credits or, for an additional fee, 2 graduate credits except that the off-campus courses are not eligible for graduate credit; Fee: \$330. Visit [www.melt.appstate.edu](http://www.melt.appstate.edu) or contact Dr. Doug Jones ([jonesd@appstate.edu](mailto:jonesd@appstate.edu) or 828.262.2360) for more information about this summer's math program. The dates of the on-campus offerings are:

- June 21-25: SITE: Algebra and SITE: Geometry
- June 28 – July 2: Integrating Middle School Mathematics and Teaching North Carolina Math B/C
- July 12-16: Purposeful Pedagogy

## Science & Mathematics Integration for Literacy Enhancement (SMILE)

Project SMILE, a three-year NSF-funded program, will start in earnest this summer with teacher teams from eight middle schools. The project is aimed at helping teachers learn how to best use technological tools to integrate teaching scientific inquiry with mathematical problem solving. Principal Investigator Max Dass wrote the grant proposal that earned just under \$450,000 to pay for twenty middle school teachers to participate in the program. Assisting Max with the project are co-PI Tracy Goodson Espy, Chrystal Dean, Jessica Howells (Graduate Assistant), Phil Johnson, Gene Moore, and John Spagnolo. The schools and teachers participating in the project are

**Avery Middle School, Avery County:** Pat Hopper and Anna Marie Tapio

**Clemmons Middle School, Forsyth County:** Erika Patterson and Amanda Roberts

**Granite Falls Middle School, Caldwell County:** Keith Atkins, Dawn Comer and Ana Haywood

**Hanes Magnet School, Forsyth County:** Vicki Clinkscales and Melissa Pinnix

**West Alexander Middle School, Alexander County:** Allen Price, Loretta Thomas, Jody West and Wendy Wiseman

**West McDowell Junior High, McDowell County:** Jacqueline Oglesby and Lynn Pettepher

**William Ellis Middle School, Davie County:** Karen Martin and Heather Ratledge

**William Lenoir Middle School, Caldwell County:** Glenda Bentley, Nancy Felton and Rachel Main



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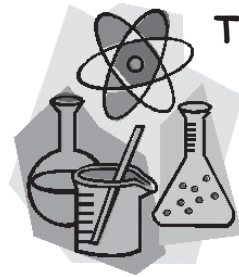
## MATHEMATICS & SCIENCE PARTNERSHIPS

Mathematics and Science Partnerships (MSPs) are federally-funded programs that are administered by the North Carolina Department of Public Instruction. Dee Hanlin of the Northwest Regional Educational Service Alliance received one of the MSP grants to fund the Mountain Valley Partnership (MVP) for Elementary Mathematics, a program that provides staff development to teachers in K-5 mathematics. The Partnership involves three institutions of higher education (Appalachian State University, Catawba Valley Community College and Surry Community College) and seven school districts (Ashe, Alleghany, Catawba, Elkin City, Hickory City, Wilkes and Yadkin). More than 250 teachers have participated in the MVP program. Another MSP program between ASU and the school districts of Cleveland County, Rutherford County and McDowell County has funded professional development for more than 30 seventh and eighth grade science teachers in the Quality Teaching and Learning program; the concluding workshop will take place this summer on campus. This summer marks the third and final year of both grants; grant proposals have been written by both groups for the next cycle and we are optimistic that more funding will be forthcoming for professional development opportunities in math and science. The science grant proposal will be with Cleveland County, McDowell County, Avery County and Mitchell County. Also, MSP funds have provided significant funding for the MELT/SITE programs.



## INNOVATIVE TECHNOLOGY EXPERIENCES FOR STUDENTS AND TEACHERS (ITEST)

The NSF-funded STEM and ICT 3D Instructional Worlds: The 3D Experience, a joint venture of Appalachian State University and Clemson University, is heading into its second year. Nita Matzen would like to find STEM faculty who would be willing to connect with teachers and students in the project in a virtual world. Go to <http://www.stem-ict-3d.org> to find out more about the project and see if this is something you might be interested in helping with. Contact Nita at [matzennj@appstate.edu](mailto:matzennj@appstate.edu) to find out what would be involved.



## THURSDAY NIGHT SCIENCE SEMINARS

Normally, the Thursday Night Science Seminars are finished by this time, but this year there are still three more that will take place in May. The remaining seminars are on Astronomy with Jon Saken of the Department of Physics and Astronomy. These seminars were delayed until now to take advantage of what should be good viewing conditions. The Rankin Observatory has a new, powerful telescope that will allow for excellent viewing of the sky. The astronomy series of seminars will take place on May 6, 13 & 20 from 8:00-10:00 P.M. in the Rankin Science Observatory.

Next year's seminars will be on "Misconceptions in Science." Can two brown-eyed parents have a blue-eyed child or two blue-eyed parents have a brown-eyed child? Does the common perception of the theory of evolution agree with Darwin's theory? Such questions as these will be examined with all areas of science being represented. For updates on the fall science seminars, check our website at [www.msec.appstate.edu](http://www.msec.appstate.edu).

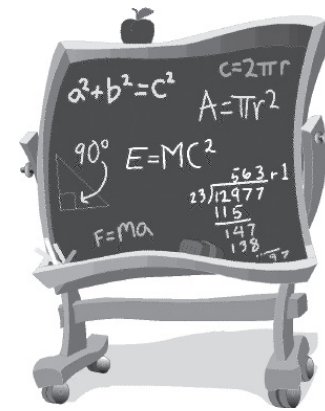
## MATH FAIRS

The NCCTM Western Region Math Fair was held on March 20 at the ASU Plemmons Student Union. There were 136 projects representing 163 students from 47 schools. There were many outstanding projects that demonstrated the students' love of and devotion to mathematics. It was obvious that the students had worked hard on their projects. All the first, second and third place winners as well as those receiving an Honorable Mention were invited to compete in the State Math Fair against the winners from the Central Region and Eastern Region Math Fairs. The State Math Fair was held at the North Carolina School of Science and Mathematics in Durham on April 30. There were 67 outstanding projects representing 79 students from 36 schools, and the winning projects will be on display at the Fortieth Annual State Mathematics Conference in Greensboro on October 28-29. Betty Long, Professor in the Department of Mathematical Sciences and Assistant Director of the MSEC, coordinates Math Fairs for the state.



## MATH CONTESTS

Appalachian was one of the regional sites for the Algebra I and Comprehensive math contest categories of the State Math Contest on March 30, 2010. The math contests are hosted by the Department of Mathematical Sciences and the Mathematics and Science Education Center; Lori Tyler, Director of Summer Ventures in Science and Mathematics, coordinated the contests. There were 19 schools with 127 students participating in the Algebra I contest and 7 schools with 27 students in the Comprehensive contest. The top three schools in Algebra I were Hanes Magnet School, Valley Springs Middle School, and Community House Middle School; the top three individual winners were Drew Poteat of West Iredell Middle School, Alden Caron-O'Neill of Hanes Magnet School, and Hannah Dent of Mill Creek Middle School; in addition to these three, 12 others qualified for the next round of tests on April 29 at UNC Asheville. The top three schools in the Comprehensive division were Mount Tabor High, Watauga High, and Patton High; the top three individual winners were Sammy Luo of Hanes Magnet School, Emily Chen of Panther Creek High, and Joe Lu of Mount Tabor High; in addition to these three, five others qualified for the State Comprehensive Contest at the North Carolina School of Science and Mathematics in Durham on April 15, 2010.



## MSEC PROGRAMS FOR K-12 STUDENTS

The Math and Science Education Center is always pleased to arrange math or science programs for visiting students. We have had large numbers of middle school students, mostly from the GEAR UP program, enjoying special science presentations arranged by the MSEC. GEAR UP is a federally-funded program to increase academic ability and college preparation of middle and high school students from low-income schools. Science educators Jeff Goodman and Leslie Bradbury do science presentations that enthrall the visiting school groups. The last group to visit campus this semester was Gwen Temple's Science Club from North Wilkes Middle School. Chemist Sammye Sigmann presented a program that captivated the audience from North Wilkes; they especially liked the demonstrations in which she "blew things up." Following the chemistry presentation, the students were shown the electron and other large microscopes in the microscopy lab by Guichuan Hou; what one can view with these microscopes is amazing.

**Family Math Nights and Family Science Nights** in elementary and middle schools involve students and their parents exploring together interesting facets of mathematics and science. Bill and Bergitta McGalliard conduct the Family Math Nights; Judy Sink and Gail Bastarache conduct the Family Science Nights. Also popular are presentations for grades 3-9 classes on rocks, minerals, North Carolina geology, the Blackbeard shipwreck, geo-archaeology project or other geology topics. The MSEC is pleased to offer these programs at no cost to the schools. Contact Ms. Vickey Isaacs at [isaacsve@appstate.edu](mailto:isaacsve@appstate.edu) for further information on these or other programs.



The **APPALACHIAN STATE UNIVERSITY MATH CAMP**—summer fun and enrichment for ALL rising 6th-12th graders. Students work cooperatively on teams. All students see that they can be successful in math and have fun at it.

**When:** July 12-15, 6:00-9:00 pm  
**Where:** Appalachian State University, Walker Hall  
**Info:** [www.camps.appstate.edu](http://www.camps.appstate.edu)  
**Director:** Dr. Anita Kitchens (ASU Math Department) 828-264-0181

The **EXTENDED MATH CAMP** is a unique opportunity for high school students who enjoy math and may see teaching in their future. More information on the Extended Math Camp: [kitchensan@appstate.edu](mailto:kitchensan@appstate.edu) or 828-262-2368



**Visit us online at [www.msec.appstate.edu](http://www.msec.appstate.edu)**

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