

Mathematics & Science Education Center

NOTEWORTHY 2008-2009 DATES

October 1, 2008 - January 31, 2009: Summer Ventures Recruitment Period

October 30 - 31: NCCTM State Mathematics Conference in Greensboro

October 30 - November 1: NSTA Regional Science Conference in Charlotte

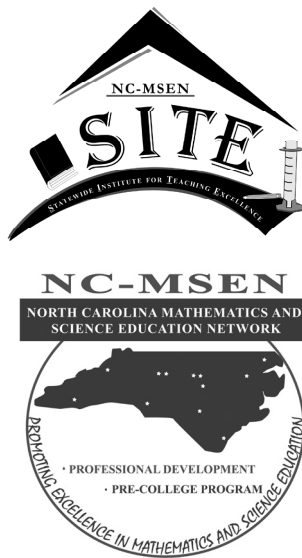
Nov. 13, Jan. 22, Feb. 2, Feb. 10, Feb. 24, March 17, March 26, April 2, April 6:
Remaining Darwin Bicentennial lectures on ASU campus

Feb. 21: NCCTM Western Region Math Conference

March 19 - 22: NSTA National Conference in New Orleans

March 28: Western Region Math Fair

April 22 - 25: NCTM Annual Meeting and Exposition in Washington, D.C.



- Visit our website at www.msec.appstate.edu -

Math & Science Education Center: Phone: 828/262-3185, Fax: 828/265-8677, Email: johnsnpe@appstate.edu

MSEC Staff: Phillip Johnson, Director; Betty Long, Assistant Director;

Lori Tyler, Summer Ventures in Science and Mathematics Director; Vickey Isaacs, Administrative Assistant

Editor: Phillip Johnson; Assistant Editors: Vickey Isaacs, Betty Long and Lori Tyler

Appalachian
STATE UNIVERSITY

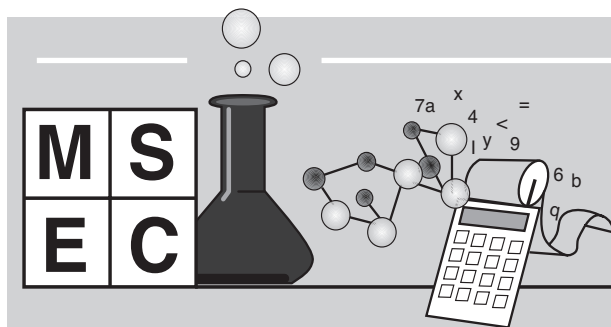
Mathematics and Science Education Center

Walker Hall, Room 222

P.O. Box 32091

Boone, North Carolina 28608-2091

U.S. POSTAGE
PERMIT NO. 36
PAID
NON-PROFIT ORG.
BOONE, NC

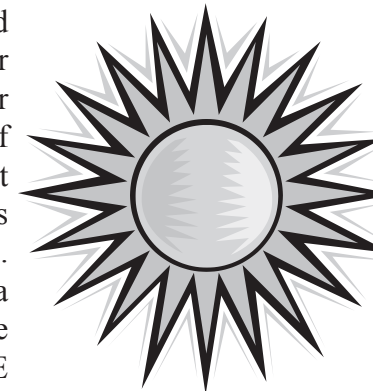


FALL 2008

Appalachian State University MATHEMATICS & SCIENCE EDUCATION CENTER

SUMMER 2008 PROGRAMS

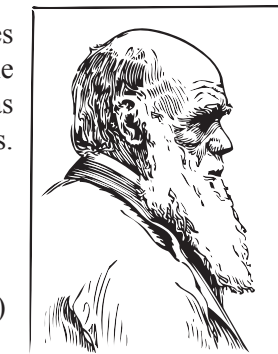
The Mathematics and Science Education Center (MSEC) concluded another successful summer of professional development programs for mathematics and science teachers. The North Carolina Mathematics and Science Education Network SITE (Statewide Institute for Teaching Excellence) Program, instituted in summer of 2006 and considerably expanded since, continues to be a major component of our summer offerings. We had NC-MSEN SITE programs in 3-5 Science, Geometry, and Advanced Functions and Modeling. A disappointment was that we did not get sufficient enrollment to run the planned SITE programs in 6-8 Science and Biology. Local school systems have suffered from lack of funds for professional development and from increased gas costs for running their buses. Hopefully, next summer will be better and we will be able to offer more programs. The MSEC works closely with and provides significant funding to the Mathematics Education Leadership Training (MELT) Program; MELT had a successful summer with a full offering of eight courses that were taken for either graduate credits or license renewal credits and, in a few instances, by teachers working on lateral entry. We anticipate a full schedule of MELT courses again in the summer of 2009. For the second summer, we held a Middle Math Summer Institute and hope to continue this program in the future. Finally, we were pleased to host a Green and Micro-Scale Chemistry workshop that was funded by a grant from the Environmental Protection Agency through the North Carolina Department of Environment and Natural Resources and Waste Production Partners.



DARWIN BICENTENNIAL CELEBRATION CONTINUES

The lecture portion of the activities surrounding the celebration of the life and work of Charles Darwin has drawn large and enthusiastic crowds. The remaining presentations are

- **Nov. 13, 2008:** Janet Browne of Harvard University (Blue Ridge Ballroom, Plemmons Student Union)
- **Jan. 22, 2009:** Edward Larson of Pepperdine University (Farthing Auditorium)
- **Feb. 2, 2009:** Michael Ruse of the University of Florida (Farthing)
- **Feb. 10, 2009:** James Costa of Western Carolina University (Powers Hall, Broyhill Inn and Conference Center)
- **Feb. 24, 2009:** Sean Carroll of the University of Wisconsin (Farthing)
- **March 17, 2009:** Paul Ewald of the University of Louisville (Powers Hall)
- **March 26, 2009:** Jonathan Weiner of Columbia University (Blue Ridge Ballroom)
- **April 2, 2009:** Elisabeth Lloyd of Indiana University (Blue Ridge Ballroom)
- **April 6, 2009:** Niles Eldredge of the American Museum of Natural History (Farthing)



All talks are presented at 8:00 PM and are free and open to the public. Teachers may earn license renewal credits for attending the presentations and affiliated events. For more information on the speakers and their topics, along with other activities related to the bicentennial celebration, visit <http://universityforum.appstate.edu>. For information concerning receiving license renewal credits, contact johnsnpe@appstate.edu.

USING SCIENCE NOTEBOOKS IN ELEMENTARY SCHOOL

Last year, NC State University and Appalachian State University jointly sponsored a series of three workshops for elementary school teachers on the effective use of science notebooks. We plan to repeat these workshops again this year during spring semester. The workshops will be in February, March and April. Once specific dates are set, you may get the syllabus and registration form from our website: www.msec.appstate.edu. Following are some details:

- Learn to Use, Assess and Evaluate Science Notebooks
- Research-based inquiry approach
- Classroom proven to improve student performance
- Ready for immediate classroom use
- 3 CEUs in Reading or Science for completion of all three workshops and two classroom projects
- Low cost: \$200 for the series of three workshops. No partial attendance; no refunds

SPECIAL OPPORTUNITY FOR MIDDLE SCHOOL TEACHERS

Would you like to spend two weekends in Boone virtually free and earn license renewal credits? The Water Resources Planning Committee on campus has received a grant from the National Fish and Wildlife Foundation to host a stream ecology/stream rehabilitation workshop for fifteen middle school teachers. The workshop will consist of two Saturday-Sunday sessions on June 6-7 and June 13-14 and will earn 2.4 license renewal credits. Paid for by the grant are lodging, mileage reimbursement, lunches/snacks, and all materials. As soon as you can, let me know at johnsnpe@appstate.edu of your interest and whether you will need lodging or will drive in each day. The workshop will run each day from 9:00-4:30. Teachers from far away may qualify for two nights' lodging in order to make the 9:00 am start time manageable.



MSEC MOVING

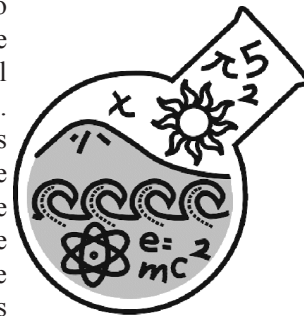
When the new Reich College of Education Building is completed, the Math and Science Education Center will move from its long-time home in Walker Hall to occupy a suite on the first floor of the new building. There will be a math and science classroom attached to the Center that will have the latest in technology for teaching math and science and also serve the needs of the annual seminar series. While we are sad at leaving our home of many years, we look forward to what the new location will have for us.

CURRENT STUDENT PROGRAMS



Family Math and Family Science nights continue to be among the most popular programs sponsored by the MSEC. These programs in elementary and middle schools involve students and their parents investigating together interesting facets of mathematics and science. Also popular are presentations for grades 3-9 classes on rocks, minerals, North Carolina geology, the Blackbeard shipwreck geo-archeology project, or another geology topic. Due to their popularity, requests for these programs need to be made early. The Family Science nights are already fully subscribed for this year. Family Math nights still have some available times next semester. Dates are available for the geology in the schools program. The MSEC is pleased to offer these programs at no cost to the schools. Contact Ms. Vickey Isaacs at isaacsve@appstate.edu for further information on these or other programs.

Several middle school groups are visiting campus this semester and enjoying special science presentations arranged by the MSEC. Originally, these programs were arranged for GEAR UP, a federally-funded program to increase academic ability and college preparation of middle and high school students from low-income schools. Students and teachers from schools not in GEAR UP have heard of the enjoyment and learning that takes place in these science programs, and have requested similar programs. We will be pleased to arrange for science programs for your school. No times are available for the remainder of this semester, but a few dates are available in spring semester of 2009.



FREE POSTERS

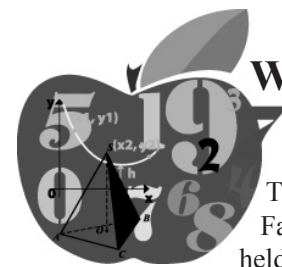
Many good science and nature posters are available to current and pre-service teachers. Pre-service teachers in the science methods classes always enjoy looking through the posters when they come to see what the Math and Science Education Center has that can aid them in their methods classes and later when they are teaching. You will find posters with pictures and information that will interest students in your classroom. There is also a shelf of free print materials relating to various areas of science that you may find useful. In addition to the science and math materials available for check out in the resource rooms, there is a high-quality fossiliferous grit pile behind the Broyhill Inn and Conference Center that you may take samples from for your class.

SUMMER STUDENT PROGRAMS

While the Math and Science Education Center is primarily involved with professional development for mathematics and science teachers, we continue to aid in summer programs in math and science for K-12 students. The eleventh annual **Math Camp** for rising sixth to twelfth graders, sponsored by the Department of Mathematical Sciences and the Mathematics and Science Education Center, took place during July 7-10 in Walker Hall. The program benefits students with varying backgrounds in mathematics. The first **Camp Invention**, a hands-on science enrichment program for students in grades K-5, took place at the Living Learning Center on the ASU campus during June 23-27. The program had more students wanting the program than could be accommodated, and the students were enthusiastic in exploring science through hands-on activities. The Math and Science Education Center is pleased to continue its support of these popular programs.

SUMMER VENTURES IN SCIENCE AND MATHEMATICS

Of the six universities in the UNC System that offer the Summer Ventures program, Appalachian had the largest number of students with 92 enrolled. Ms. Lori Tyler, Director of SVSM, is currently visiting schools with information about the statewide program for rising high school juniors and seniors. If you would like to schedule a visit to your school so that your students can find out more about the program, contact Lori at tylerle@appstate.edu. For more information about the Summer Ventures Program, visit <http://www.summerventures.org> or <http://www.summerventures.appstate.edu>.



WESTERN REGION MATH EVENTS

The 2009 NCCTM Western Region Math Fair for students in Grades K-12 will be held on Saturday, March 28 at the Plemmons Student Union at Appalachian State University. All projects must be pre-registered by March 9, and there is a \$7.00 nonrefundable registration fee for each student entering a project. The registration form can be found at www.ncctm.org. For more information, contact Cindy Robinson at 828-266-3169 or crobinson@caa.k12.nc.us. The 2009 NCCTM Western Region Math Conference is scheduled for February 21, but the venue has not yet been determined.



Notes from the Director

Fall has been a good time in the northwestern mountains with pretty leaf colors, the first snowfall in late October, and a winning ASU football team. As the semester approaches its end, we are beginning to think of the coming summer's professional development programs in math and science. We hope to offer most of the workshops in the Statewide Institute for Teaching Excellence (SITE) Program. Last summer we had SITE workshops in 3-5 Science, Advanced Functions and Modeling, and Geometry. We plan to offer all the workshops that we had last summer and add SITE: 6-8 Science and SITE: Biology. Let us know if there would be interest in the other two SITE programs, K-2 Science and Content Area Reading in Science and Mathematics. We anticipate having another full summer program of courses in the MELT program. The cost of the programs is not yet determined.

We are constantly working to reduce the cost of our professional development programs. Earlier in the newsletter, you will find a workshop offered on using science notebooks in elementary school that we hope to offer in the spring. The advertised cost is a significant reduction from earlier science notebook workshops. As mentioned earlier in the newsletter, through a special grant a free workshop in stream ecology/stream rehabilitation will be offered in June for middle school teachers. The current Darwin Bicentennial Celebration lectures are free to everyone and carry license renewal credits for teachers. We cooperate in two Math and Science Partnerships that offer workshops without cost to teachers in the LEAs that have the grants. A consortium comprised of ASU and Clemson University in partnership with the MSEC recently received a grant from the National Science Foundation (NSF) to motivate and provide the skills necessary for diverse, under-represented seventh-grade students to pursue studies and careers in STEM (Science, Technology, Engineering and Mathematics) disciplines, particularly information communications technologies. The highly competitive grant is in the NSF Innovative Technology Experiences for Students and Teachers (ITEST) program. We will work with students and their teachers from Catawba and Davie County Schools in North Carolina and two counties' schools in South Carolina. We are currently investigating two possible grants through the North Carolina Biotechnology Center and the National Science Foundation that would make some science professional development opportunities available without cost to the participants. We will continue to investigate other possibilities. Please let us know of any special professional development needs that you have in your local school systems.

Phil Johnson