



SUMMER 2011 RECAP AND SUMMER 2012 OUTLOOK

Despite the continuing state budget problems, the MSEC, with help from others, offered a number of math and science professional development opportunities in summer 2011 that attracted large audiences. With funding for professional development almost nonexistent in school systems, teachers look for opportunities such as those offered in math and science by the Center. There was no cost to participants or school systems for any of the workshops or institutes offered during the summer. This was the first time that the Math Education Leadership Training (MELT) program had been offered without cost. There were six courses offered in the MELT program, all emphasizing a common core approach and all offered for either graduate or license renewal credit.

Elementary, middle and high school teachers participated in a variety of science programs during the summer. Lengths of programs varied from a two-day Virtual World Technology Conference to a three-week middle school institute in Science and Mathematics Integration for Literacy Enhancement (SMILE). The three-year NSF-funded SMILE program has one year left and will conclude with a one-week program next summer. The program has helped teachers learn how to best use technological tools to integrate teaching scientific inquiry with mathematical problem solving. Further details of Project SMILE, including names of the project team and participants, are available in the spring 2010 newsletter available on the MSEC website. Other popular summer science programs were a week-long science workshop for grades 5-8 teachers, a three-day meteorology workshop for middle and high school teachers that was supported by a NASA North Carolina Space Grant, and a biology institute. A total of 125 teachers took advantage of the math and science programs.

Although it is too early to tell what programs will be offered in summer 2012, we are considering a number of possible offerings. We hope to have several math courses in the MELT program. A biology workshop to follow up on last summer's offering is being considered, and a biotechnology workshop is also a possibility. We hope to again have one or more science workshops for K-8 science. The meteorology workshop that Ms. Laura Mallard led had twice as many applicants as we could accept, and we hope to obtain another grant to run a similar workshop next summer. Also, Ms. Mallard may conduct an earth science workshop. Hopefully, funding will be continued for the Appalachian Mathematics Partnership mentioned elsewhere in the newsletter. We may not be able to offer all of the programs mentioned, but we can probably offer many of them. Understanding the budget situation that school systems face, we are endeavoring to offer without cost all programs in which the MSEC is involved. Many of the science workshops or institutes will be held in the mathematics and science education classroom in the new Reich College of Education building. Please let us know of programs that you would like to see offered and we will investigate the feasibility of offering them.



Programs for K-12 Students

The MSEC is always pleased to arrange math or science programs for visiting students. Especially popular with visiting school groups have been science presentations by Jeff Goodman and Leslie Bradbury. Most of these programs take place during the academic year, but programs for summer visitors are also possible.

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 Birgitta McGalliard conduct the Family Math Nights; Judy Sink and Wendy Smith 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 by Jack Callahan. 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.



The Mathematics and Science Education Center jointly sponsored with the Department of Mathematical Sciences the fourteenth annual Math Camp for rising sixth through twelfth graders in summer of 2011. New this past summer was an ASU Math Camp at Discovery Place in Charlotte in addition to the on-campus Math Camp. We are pleased to be a joint sponsor of this program that continues to draw large numbers of students year after year.

Appalachian Mathematics Partnership

Faculty members from the Department of Mathematical Sciences and from the Department of Curriculum and Instruction are pleased to announce the receipt of a Mathematics and Science Partnership Grant to support the Appalachian Mathematics Partnership (AMP). Dr. Tracie Salinas of the Department of Mathematical Sciences is the project director. Other members of the project team are Drs. Debbie Crocker and Katie Mawhinney of Mathematical Sciences and Dr. Kathleen Lynch-Davis of Curriculum and Instruction. Master Teacher Mike Verkaik of Michigan is also on the team. This project assists regional schools in improving student achievement in mathematics by achieving their visions of inquiry-oriented mathematics in the classroom in grades 8-12. AMP provides teachers with an immersion experience in an inquiry-oriented classroom complemented by experience with the Common Core State Standards, all while delving into rich mathematics content. Appalachian State University serves as the Higher Education partner of the project, and the Avery County School System serves as the project's fiscal agent. Additional partners include Alleghany County Schools, Ashe County Schools, Burke County Schools, Caldwell County Schools, Watauga County Schools, Wilkes County Schools, Crossnore School, Inc., the ASU Mathematics and Science Education Center, the Appalachian Public School Partnership, and the Department of Mathematical Sciences. The Mathematics and Science Education Center is pleased to be one of the partners in this endeavor.



North Carolina Science Festival

As mentioned in the last newsletter, the North Carolina Science Festival will now be in the spring, April 13-29, rather than in the fall as it was before. The feeling is that having the Festival in the spring better engages the K-12 community and better accommodates academic and other calendars. More information will be in the spring newsletter and on our website as it becomes available. You may also get information by visiting www.ncsciencefestival.org.

NCCTM Math Fairs

The North Carolina Council of Teachers of Mathematics (NCCTM) sponsors three Regional Math Fairs. Winners from the three Regional Fairs are invited to participate in the State Math Fair. The winners of the NCCTM State Math Fair for 2011 may be found at ncctm.org/math_fair.cfm. This year, the Western Region Math Fair is March 31, 2012 at Plemmons Student Union on the campus of Appalachian State University in Boone, N.C. Last year's winners of the Western Region Math Fair were posted in the spring 2011 newsletter, which may be accessed on the MSEC website. The NCCTM State Math Fair will be Friday, May 4 at the North Carolina School of Science and Mathematics in Durham, N.C.



Start working with your students on their projects for the Western Region Math Fair. For more information on the math fairs, go to the NCCTM web site, ncctm.org, and click on Math Fairs on the left of the screen. New information on this year's fairs and registration forms will be posted.



Changes in the MELT Program

Dr. Doug Jones resigned his position as Distinguished Professor of Mathematics Education and Director of the Mathematics Education Leadership Training (MELT) program this summer and has left Appalachian State. Dr. Debbie Crocker is the Interim Director of the MELT program this year. The Department of Mathematical Sciences will conduct a national search to fill the vacated position during the 2011-2012 academic year.

Plans for MELT offerings in the summer of 2012 are in process now. Tentative plans will be posted on the MELT website, melt.appstate.edu, by late October or early November. Check the website to make your plans to participate next summer as we all implement the Common Core State Standards for Mathematics in North Carolina. Feel free to contact Dr. Debbie Crocker at crockerda@appstate.edu if you have questions.

NCCTM ANNUAL MATHEMATICS CONFERENCE

This year's State Mathematics Conference will be on October 27-28 at the Koury Convention Center in Greensboro. The theme is "Strengthen Your Core Understanding: Mathematical Practices and Mathematical Content." There will be many sessions and workshops on a wide variety of topics for teachers and other school personnel at all levels. The keynote speaker will be Dr. Jere Confrey, and the featured speakers will include Greg Tang, Jeane Joyner, and Amy Scrinzi. With the implementation of the Common Core State Standards (CCSS) less than a year away, the program for this year's conference will include many informative sessions on the CCSS. The sessions will include content in the Common Core Standards and ideas for implementing the Standards for Mathematical Practice. This will be a wonderful opportunity for teachers and administrators to educate themselves on this new curriculum and the Standards for Mathematical Practice. To register for the conference, go to NCCTM.org.

The 2011 Leadership Seminar will be held at the Koury Convention Center on Wednesday, October 26 (the day before the State Mathematics Conference). The theme is "Implementing the Common Core State Standards for Mathematics." The North Carolina Department of Public Instruction will do an information session on the CCSS with updates and time for questions, and the keynote speakers will be Dr. James Williams and Dr. Juanita Copley. Dr. Williams' presentation will focus on the mathematics content in the CCSS, and Dr. Copley will discuss what the Standards for Mathematical Practice mean for teachers and facilitating their use. The Leadership Seminar will be another great opportunity for teachers and administrators to educate themselves on this new curriculum and the Standards for Mathematical Practice. To register for the Leadership Seminar, go to NCCTM.org.