



Spring 2012

Appalachian State University MATHEMATICS & SCIENCE EDUCATION CENTER

SUMMER 2012 PROFESSIONAL DEVELOPMENT

Varied professional development opportunities in mathematics and science will be available during the summer of 2012. All the science workshops and institutes are free, but there will be a fee for the mathematics programs. Details of the workshops are available on our website.



- June 18-22:** Concluding week of Project SMILE (Science and Math Integration for Literacy Enhancement), led by Max Dass and Tracy Goodson-Espy. (NSF-funded, FULL)
- June 19-21:** AP Biology Institute, led by Marilyn Pendley and Amy Bradley.
- June 25-29:** Earth Science Workshop for Middle and High School Teachers, led by Laura Mallard. Understanding the Standards for Mathematical Practice in the CCSS
- June 25-28:** K-5 Science Workshop, led by Judy Sink and Lou Moore (Notice the 3-8 Science Workshop below; you may take both).
- July 9-13:** Misconceptions in Biology Workshop, led by Max Dass and Amy Bradley. Multimedia in the CCSS
- July 16-18:** Bio-monitoring of Genetically Modified Organisms Workshop, led by Eva Gonzales with Amy Bradley (Supported by a grant from the North Carolina Biotechnology Center; registration at www.ncbiotech.org/summerworkshops)
- July 16-20:** High Country Robotics, led by Eric Marland; registration at <http://www1.appstate.edu/~marland/robots/HCRobots.html>
- July 17-19:** 3-8 Science Workshop, led by Leslie Bradbury and Rachel Wilson (Notice the K-5 Science Workshop above; you may take both as the content will be different).
- July 30-August 1:** Middle School Science Workshop at the Catawba Science Center (CSC), led by Amy Bradley and Marilyn Pendley; jointly supported by the MSEC, CSC, and Carolina Biological Supply.



MELT Professional Development Institutes

Six weeklong professional development institutes for mathematics will be offered on the ASU campus this summer. The weeks of the institutes are June 18-20, June 25-29, and July 9-13. The institutes are offered in cooperation with Appalachian State University's Department of Mathematical Sciences, the Mathematics and Science Education Center and the Mathematics Education Leadership Training (MELT) Program.

All of the institutes are focused on the Common Core State Standards for Mathematics (CCSSM). This curriculum will be implemented and tested in the 2012-13 school year. The fee for each institute is \$250. Participants will receive 3 CEU credits for an institute. If an institute is taken for graduate credit, the usual graduate fees will also apply.

Registration for all institutes is available now. A registration form and descriptions of the institutes can be found on the MELT website at: www.melt.appstate.edu or on the Mathematics and Science Education Center website at: www.msec.appstate.edu.

The dates and institutes for this summer are:

June 18-22—Algebra and Functions in the Common Core State Standards for Mathematics (SITE: Algebra)
Geometry in the Common Core State Standards for Mathematics (SITE: Geometry)

June 25-29—Modeling Across the Curriculum in the Common Core State Standards for Mathematics
Understanding the Standards for Mathematical Practice

July 9-13—Middle School Mathematics and the Common Core State Standards
Multimedia in the Common Core Mathematics Classroom

If you have questions about 2012 MELT institutes, please contact Dr. Debbie Crocker, Interim Director of MELT, at 828-262-2381 or crockerda@appstate.edu

STAY INFORMED OF MSEC ACTIVITIES

Print copies of the newsletter are distributed to math and science and some other departments on campus and are available at the MSEC for visitors and participants in center programs. You can always read both current and earlier newsletters at www.msec.appstate.edu. If you are a K-12 teacher, we invite you to add your name to one or more of our elementary, middle or high school list serves by contacting Vickey Isaacs at isaacsve@appstate.edu; also, please let us know when you have an address change. In addition to information in the newsletter and information sent to listserv members, the MSEC website always has the most up-to-date information on center activities.



NORTH CAROLINA SCIENCE FESTIVAL

April 13-29, 2012

A one-day Science Expo was held on the ASU campus on Monday, April 16 as a part of the North Carolina Science Festival. The main Expo event was in the Holmes Convocation Center from 10:00am-2:00pm with other stand-alone events in Plemmons Student Union and other places on campus. A weekday was chosen this year so that schools could come to campus for a field trip and have their students experience some awesome science activities. More than 100 students participated in the day's activities. For next year's Science Festival, check our website.

SPRING SCIENCE SEMINARS

The last two seminars of the 2011-2012 series were part of this year's North Carolina Science Festival. The seminars are open to everyone, are free, and offer license renewal credits (0.2 per seminar) to teachers. Seminars are held in room 124A in the new Reich College of Education Building from 6:00-8:00 p.m. with refreshments at 6:00. The dates, presenters, and topics were:



April 19—Andy Heckert, Geology: Are Birds Really Dinosaurs/Is Archaeopteryx not a Bird Anymore?

April 26—Marty Root, Nutrition and Health Care Management: Is There Meat in Our Future?

Check our website for the next seminars starting in September of 2012.

NORTHWEST REGIONAL SCIENCE FAIR

The Northwest Region of North Carolina had numerous outstanding projects on exhibit on Saturday, February 18, 2012 at the regional science fair at the Stone Center in the Wilkes County Schools Office Complex in North Wilkesboro. There were 38 Elementary Division, 82 Junior Division, and 24 Senior Division projects from the region. A large number of school personnel worked to assure the success of the fair and judges consisted of teachers, professors, and scientists and engineers from industry. Participants from our region who went on to the State Science Fair at Meredith College in Raleigh on March 23-24, 2012 did really well in representing our district. The list of State Fair winners is posted at <http://www.ncsciencefair.org>.

NCCTM WESTERN REGION SPRING MATHEMATICS CONFERENCE

The Western Region Spring Mathematics Conference for pre-service and in-service teachers in Grades K-12 was held on March 24 at Charles D. Owen High School in Black Mountain. The theme was "Getting to the Core of Mathematics!" and the sessions were geared toward various aspects of the Common Core State Standards for Mathematics (CCSSM). Katie Mawhinney, Western Region NCCTM President, coordinated and directed the conference. There were fourteen speakers, and Kitty Rutherford, Elementary Mathematics Consultant at the North Carolina Department of Public Instruction, gave an update on the CCSSM in the closing session. The speakers did a wonderful job, and the feedback was positive. Everyone left the conference with a lot of useful ideas and activities for their classrooms as well as a better understanding of the CCSSM.



15TH ANNUAL APPALACHIAN STATE UNIVERSITY MATH CAMP

The 15th annual Appalachian State University Math Camp—the place to be! For ALL rising 6th-12th graders. Love math...hate math....never have been good at it... math is my favorite... math is awful! All of these types are at math camp. All students see that they can be successful and have fun. Recommend that your students come. Bring your own kids and have a family vacation. We have a hotel deal for math camp participants at the new Marriott.

When: July 9-12th, 6:00-9:00 pm
Where: Appalachian State University, Walker Hall
Information: www.conferences-camps.appstate.edu/academic/mathcamp.php

Also, see pictures and check us out on Facebook at <http://www.facebook.com/MathCampatAppalachianState>
Director: Dr. Anita Kitchens (ASU Math Department)
828-773-1536, 828-262-2368, 828-264-0181



NCCTM WESTERN REGION MATH FAIR

The NCCTM Western Region Math Fair was held on March 31, 2012 at Appalachian State University for students in Grades K-12. The fair was coordinated by Travis Gillespie (Parkway Elementary School), Sumer Inman (McDowell High School), Lincoln Masters (Avery Middle School), and Holly Goforth. Ninety ASU pre-service teachers and other volunteers assisted them.

There were 126 projects presented by 151 students from 24 schools. The hard work of the students who participated was evident in the outstanding projects. The students who received First, Second, Third or Honorable Mention were invited to participate in the NCCTM State Math Fair to be held on May 4, 2012 at the North Carolina School of Science and Mathematics in Durham. The winners in the Western Region Math Fair were:

K-2 CATEGORY

First Place	J.P. Brandt (Cool Spring Elementary School)
Second Place	Jaryd Broome (Victory Christian Center School)
Third Place	Oliver Hingst (Woodland Heights Elementary School)
Honorable Mention	Bronson Leonard (Cool Spring Elementary School)
Honorable Mention	Sydney Stevenson (Scotts Elementary School)
Honorable Mention	Oliver Duncan Stone (Brevard Elementary School)

3-5 CATEGORY

First Place	Ben Simiele/Wyatt Adkins (Cool Spring Elementary School)
Second Place	Cooper Mertens /Maggie Rollins (Hendersonville Elementary School)
Third Place	Phillip Hazel (Davidson Elementary School)
Honorable Mention	Gracen Cardwell/Reese Cassidy (Cool Spring Elementary School)
Honorable Mention	Henry Young (Cool Spring Elementary School)
Honorable Mention	Josh Morrow (Hendersonville Elementary School)

6-8 CATEGORY

First Place	Arthur Annis (Clyde A. Erwin Middle School)
Second Place	Anthony Winkelman (Mount Mourne IB School)
Third Place	Ryan Gottberg (Mount Mourne IB School)
Honorable Mention	Max Bailey (Grandview Middle School)
Honorable Mention	Maggie Jackson (Mt. Pleasant Middle School)
Honorable Mention	Gabariel Moore (Victory Christian Center School)

9-12 CATEGORY

First Place	Ayano Annis (Clyde A. Erwin High School)
Second Place	Brandon Rogers (Victory Christian Center School)
Third Place	Bradyn Litster/Luan Nguyen (Victory Christian Center School)
Honorable Mention	Jonathan Harris (Victory Christian Center School)

NCCTM ELECTION

Debbie Crocker was recently elected as the NCCTM State President-Elect. She will succeed Betty Long when her term expires in April 2013. The new regional President-Elects are Kim Daily (Western Region), Vincent Snipes (Central Region), and Katie Schwartz (Eastern Region). They will succeed Katie Mawhinney (Western Region), Pat Sickles (Central Region), and Ron Preston (Eastern Region) in April 2013. Congratulations to all the winners.



ASU MATH CONTEST WINNERS

The Department of Mathematical Sciences hosted a North Carolina Math Contest for Algebra I and Comprehensive divisions on April 4, 2012. Ms. Lori Tyler, Director of the Center's Summer Ventures in Science and Mathematics program, coordinated the contest. The top schools and qualifiers for the NCCTM State Mathematics Contest (at NCSSM) and for the next round of competition in Algebra I (at UNCA) are:

Top Algebra One School Teams:

- 1st Place: Northview Middle School
- 2nd Place: Providence Day School
- Comprehensive Qualifiers:
- Nathan Shirley (Watauga High)
- Matias Horst (Watauga High)
- Zack Lee (Randolph Middle)
- Sammy Lou (R.J. Reynolds High)
- Andrew Liu (Providence Day)
- Mohammed Munim (Reagan High)
- Hajira Afreen (Hanes Magnet School)
- S. Alden Caron O'Neill (R.J. Reynolds High)

Top Comprehensive School Teams:

- 3A/4A: Providence Day School
- 1A/2A: Maiden High School
- Algebra I Qualifiers:
- Abby Temple (Maiden Middle)
- Lauren Hodges (Maiden Middle)
- Josh Trujillo (Providence Day)
- Jaden Light (Northview Middle)
- Scott Peterson (Providence Day)
- Jake Harris (Maiden Middle)
- Isabella Katz (Providence Day)
- Justin Beshears (Northview Middle)
- Stephen Allen (Northview Middle)



July 16-19th: ASU Math Camp at Discovery Place in Charlotte for at-risk students. Want to help? We have a ton of camp needs. Email kitchnsan@appstate.edu or call 828-262-2368. Partially funded by an NC Space Grant.

The following is a "sweet deal" for any high school students who want to be math teachers- the Extended Math Camp. High school students may apply to be in the "Extended" math camp. Attend the Math Camp July 9-12 and then have a really neat experience during the afternoon and in the coming school year.... a really sweet deal made possible by a grant from Burroughs Wellcome. Contact Todd Abel: abelta@appstate.edu 828-262-2380

NOTE FROM THE DIRECTOR

We have a variety of workshops/institutes being offered this summer and we hope many of you will take advantage of them. There is a fee for the MELT institutes, but all science programs are free. For detailed information on the workshops and institutes mentioned in the newsletter, visit www.msec.appstate.edu. Boone is a pleasant place to be in the summer; come and spend some time with us!

Thanks to Debbie Crocker, Betty Long, Lori Tyler, Anita Kitchens, and Vickey Isaacs for their contributions to the newsletter.

Phil Johnson

DATES TO REMEMBER in 2012

- June 18-22**, SITE: Algebra and SITE: Geometry in the CCSS; Project SMILE
- June 19-21**, AP Biology Institute
- June 25-28**, K-5 Science Workshop (Unraveling the New Science Essential Standards)
- June 25-June 29**, Earth Science Workshop; Modeling across the Curriculum in the CCSS; Understanding the Standards for Mathematical Practice in the CCSS
- July 9-12**, ASU Math Camp
- July 9-13**, Misconceptions in Biology Workshop; Middle School Mathematics and the CCSS; Multimedia in the CCSS
- July 16-18**, Bio-monitoring of Genetically Modified Organisms
- July 16-19**, ASU Math Camp at Discovery Place in Charlotte
- July 17-19**, 3-8 Science Workshop (Forces and Motion)
- July 30-August 1**, Essential Science for NC Middle Schools at Catawba Science Center, Hickory
- October 24**, NCCTM Fall Leadership Seminar, Greensboro
- October 25-26**, NCCTM State Mathematics Conference, Greensboro
- November 8-9**, NCSTA Annual Professional Development Institute, Winston Salem

**Visit us online at
www.msec.appstate.edu**

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