

NOTE FROM THE DIRECTOR

By the beginning of fall semester, we anticipate that the Mathematics and Science Education Center will be settled in its new location in the Reich College of Education Building that is nearing completion. Although we will miss our colleagues in the math and communication departments of Walker Hall, we look forward to having a complex that will be a much improved and more cohesive space than we currently have. We will be located on the first floor in order to make use of the facility easier for teachers coming in to check out or return materials.

We are pleased that all workshops/institutes being offered this year by the MSEC alone or in partnership with others will be free of cost to teachers or their school systems. We are always glad to assist in the writing of grant proposals to support programs such as, for example, Laura Mallard's workshop on meteorites. When the proposals are successful in getting funds, we will help in any way we can to make the supported programs be the best that they can be. We greatly appreciate the good working relationships that we have with so many of our partners in the workshops and institutes for mathematics and science teachers.

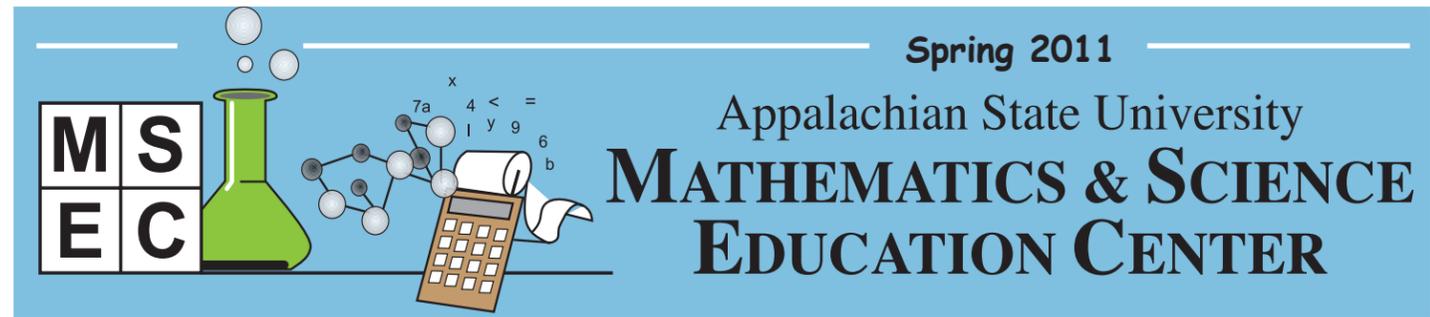
Phil Johnson

Math & Science Education Center: Phone: 828/262-3185, Fax: 828/265-8677, Email: johnsnp@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

DATES TO REMEMBER IN 2011

- April 13-16**, NCTM Annual Meeting and Exposition, Indianapolis, IN
- June 13-17**, SITE: Biology
- June 20-24**, SITE: Algebra and SITE: AFM
- June 27-30**, Math Camp on campus
- June 27-July 1**, SITE: Geometry and Number and Quantitative Thinking
- July 11-15**, Grades 5-8 Science and Exploring Mathematics with the TI-Nspire
- July 11-29**, Project SMILE
- July 25-28**, Math Camp in Charlotte
- August 4-6**, MAA Math Fest, Lexington, KY
- October 27-28**, NCCTM State Mathematics Conference, Greensboro
- November 10-11**, NCSTA Annual Professional Development Institute, Greensboro

Appalachian State University is committed to providing equal opportunity in education and employment to all applicants, students, and employees. The university does not discriminate in access to its educational programs and activities, or with respect to hiring or the terms and conditions of employment, on the basis of race, color, national origin, religion, creed, sex, gender identity and expression, political affiliation, age, disability, veteran status, or sexual orientation. The university actively promotes diversity among students and employees. 1,000 copies of this public document were printed at a cost of \$331.50, or .33 cents per copy.



NC-MSEN SITE and MELT—FREE!

The Statewide Institute for Teaching Excellence (SITE) that was developed by the North Carolina Mathematics and Science Education Network will have programs in Algebra, Geometry, Advanced Functions and Modeling (AFM), and Biology on the ASU campus this summer. The SITE mathematics courses are offered in cooperation with Appalachian's Mathematics Education Leadership Training (MELT) Program. Other on-campus MELT institutes are A Common Core Approach to Number and Quantitative Thinking and Exploring Mathematics with the TI-Nspire. All math courses will have a common core approach. In science, in addition to SITE: Biology a SITE-like workshop will be offered in Grades 5-8 Science. The customary state-wide fee for SITE courses is \$60 per day, but for the first time this fee will be waived this summer at Appalachian as will the fees for MELT courses unless the courses are being taken for graduate credit, in which case the usual graduate fees will apply. We are pleased that we have been able to get funding that allows all summer institutes and workshops being offered in cooperation with the Mathematics and Science Education Center to allow participants from North Carolina to attend at no cost. Visit www.msec.appstate.edu for more information and to register for any of the programs. Visit www.melt.appstate.edu for more information about any of the math programs. You may also contact Dr. Doug Jones, MELT Director, at 828.262.2360 or jonesd@appstate.edu for information about the math programs or Ms. Vickey Isaacs, MSEC Administrative Assistant, at 828.262.3185 or isaacsve@appstate.edu for further information about any of the programs. The dates of the on-campus offerings are:

- June 13-17**, SITE: Biology
- June 20-24**, SITE: Algebra and SITE: AFM
- June 27 – July 1**, SITE: Geometry and Number and Quantitative Thinking
- July 11-15**, Exploring Mathematics with the TI-Nspire and Grades 5-8 Science

KEEP INFORMED OF MSEC ACTIVITIES

Budget considerations and the difficulty of keeping a current mailing list have led to the decision to discontinue mailing the newsletter. You can always read both current and earlier newsletters at www.msec.appstate.edu. Print copies of the newsletter will continue to be distributed to math and science and some other departments on campus and will be available at the MSEC for visitors and participants in center programs. We regret that circumstances have made this decision necessary and hope that you will continue to follow online the various center activities. If you are a K-12 teacher, we invite you to add your name to our elementary, middle or high school listserv by contacting Vickey Isaacs at isaacsve@appstate.edu. 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.

Kudos

Congratulations to Ms. Laura Mallard, Lecturer in Geology, for receiving a NASA North Carolina Space Grant to conduct a three-day workshop on Geologic Materials from Outer Space during June 14-16 on the ASU campus and the Dark Sky Observatory on the Blue Ridge Parkway. The workshop quickly filled up from contacts on our listserv and the announcement on our website. Teachers interested in opportunities such as this should continually check our website and get their names on our listserv by contacting isaacsve@appstate.edu. Other Principal Investigators of grant-supported programs mentioned elsewhere in the newsletter are Dr. Max Dass, Dr. Dennis Scanlin and Dr. Nita Matzen. The MSEC is always eager to partner with others in developing grant proposals to provide professional development opportunities in science or math and in helping to implement the proposals that are successful.

Appalachian STATE UNIVERSITY
 Mathematics and Science Education Center
 Walker Hall, Room 222
 ASU Box 32091
 Boone, North Carolina 28608-2091
 RETURN SERVICE REQUESTED

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





Giveaway

The Center has a number of science books and VHS tapes that are available free to a good home. You are welcome to come and browse through the materials to see if any of them would be useful in your teaching. Contact Vickey for further information.

Science Seminars

The science seminars that are usually held during fall and spring were all held in the fall this year to avoid the uncertainties of January and February weather. Even so, we barely completed the seminars before some unusually early bad weather hit in December. The Fall 2010 Science Seminars were a resounding success thanks to Professors Max Dass (Biology), Howie Neufeld (Biology), Sammie Sigmann (Chemistry), Tonya Coffey (Physics and Astronomy), Eva Gonzales (Biology), Steve Hageman (Geology), Jon Saken (Physics and Astronomy), Dennis Scanlin (Technology), and to the engaged participants who contributed questions and comments that added meaningfully to the discussions. The theme of the 2011-2012 seminars will be "Great Theories and Controversies of Science." Most of the seminars will be in the fall of 2011, but some will be in April during the North Carolina Science Festival. We look forward to another year of engaging discussions around a number of theories and controversies in various areas of science.



The APPALACHIAN STATE UNIVERSITY MATHCAMP—summer fun and enrichment for ALL rising 6th-12th graders. All students see that they can be successful in math and have fun at it. Please encourage your students to come!

- When:** June 27-30, 6:00-9:00 pm
- Where:** Appalachian State University, Walker Hall
- Info:** www.conferences-camps.appstate.edu/academic/mathcamp.php
- Facebook:** www.facebook.com/MathCampatAppalachianState
- Director:** Dr. Anita Kitchens (ASU Math Department)
828-264-0181

NEW THIS YEAR! July 25-28: ASU Math Camp at Discovery Place in Charlotte. We are recruiting 5 in-service teachers in the Charlotte area to work in the camp. For more information, call Anita.



North Carolina Science Festival

The first North Carolina Science Festival that took place September 11-26 last year was a tremendous success. Physics Professor Tonya Coffey did an excellent job coordinating the many ASU events involving the Math and Science Education Center and other science entities on campus. We were pleased that surrounding counties took part in the first Festival and look forward to their continued participation. The next Science Festival will be April 13-29 of 2012; the purpose of moving the Festival to the spring is to better engage the K-12 community as well as to accommodate academic and other calendars. When details of next year's Festival become available, they will be posted on our website, www.msec.appstate.edu.



Virtual World Technology Conference for Educators

Dr. Nita Matzen of the Department of Leadership and Educational Studies led the effort to obtain an NSF-funded project in Innovative Technology Experiences for Students and Teachers (ITEST), conducted jointly by Clemson University and Appalachian State University. The intent of the STEM-ICT 3D project is to motivate and to provide the skills necessary for diverse, under-represented middle grade students to pursue studies and careers in STEM disciplines, particularly information communications technologies (ICT). Middle school teachers are encouraged to apply to the Virtual World Technology Conference that is an outgrowth from the ITEST program. There is no charge for attending the conference that will be held on June 23-24.

For further information and to register, visit: <http://appal3d.rcoe.appstate.edu>

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 26 at Appalachian State University. The theme was "Spring into Mathematics." Dr. Debbie Crocker was the Program/Conference Chair. One hundred twenty-nine people registered for the conference and there were eighteen speakers. Participants were involved in a variety of hands-on workshops and activities. 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 classes.



WIND FOR SCHOOLS Workshop

The National Energy Education Department (NEED) is hosting the first official Wind for Schools Workshop at ASU in cooperation with the university's Wind Application Center. The workshop will be held on Saturday, May 14 from 8:30-3:30. NEED is the nation's leading provider of energy education programs and materials to schools. NEED works to create high quality materials and training to improve the learning and teaching of energy. The workshop is free and will include breakfast, lunch, and classroom materials. Participation will be limited to 30 teachers. Participants will receive certification of 0.6 license renewal credit from the Math and Science Education Center; you may increase the number of CEUs by participating in a series of webinars to be presented by Dr. Dennis Scanlin during the summer. If you are interested in this opportunity, send a note to Mr. Sebastian Brundage at sebb1110@gmail.com. Further information is available from the Wind office at 828.262.7333 and at www.msec.appstate.edu. Information about NEED and the NEED curriculum guides is available at <http://www.need.org/Curriculum-Guides-Grade>

Science & Mathematics Integration for Literacy Enhancement (SMILE)

The NSF-funded Project SMILE is aimed at helping teachers learn how to best use technological tools to integrate teaching scientific inquiry with mathematical problem solving. The three-year project started in earnest last summer with a three-week workshop that was followed by implementation during the academic year of programs developed during the summer. Teams of two or more teachers from eight middle schools in Alexander, Avery, Caldwell, Davie, Forsyth and McDowell counties are participating. The twenty participating teachers, the maximum number allowed by the grant, look forward to continuing the successful start of the project with another summer's workshop during July 11-29 followed by further implementation during the academic year. A committee of seven, led by PI Max Dass and Co-PI Tracy Goodson-Espy along with an advisory board, is overseeing the project. The spring 2010 newsletter, available on the MSEC website, has the list of participating teachers and schools and also the names of the project committee members.



NCCTM Western Region Math Fair

The Western Region Math Fair was held on April 2 at Appalachian State University for students in Grades K-12. The Fair was coordinated by Theresa Compton (Blowing Rock School), Cindy Robinson (William Lenoir Middle School), Teresa Costner (Startown Elementary School), and Karen Cerjan (Startown Elementary School). They were assisted by forty-one ASU pre-service teachers and other volunteers.

There were 180 projects representing 197 students from 38 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 State Math Fair on April 29 at the North Carolina School of Science and Mathematics in Durham. The winners were:

K-2 Winners

- First Place:* Nicholas Spock & Lleyton Elliott, Woodland Heights Elementary "Different Diameter Distance"
- Second Place:* Lydia Huckabee & Anderson McNeil, Hildebran Elementary "The Ins and Outs of Polygons"
- Third Place:* Jessie Ross & Camryn Snarr, Oxford Elementary "It's What We Do"
- Honorable Mention:* Caleb D. Bush, Victory Christian Center "There's No Place Like Home"
- Henry Young, Cool Springs Elementary—"Time (Or No Time) for Golf"
- Louisa Turner, Woodland Heights "Heartbeats per Minute (Thumpity-Thump-Thump)"

3-5 Winners

- First Place:* Ariana Conway, Davidson Elementary—"Plasma Math"
- Second Place:* Christian Lee, Villa Heights Academic Center "The Incredible Shrinking and Enlarging Ray Gun"
- Third Place:* Madison Dagenhart & Cullen Hensley, Cool Springs Elementary "Count on Us"
- Honorable Mention:* Josie Shelton & Caroline Barber, Hildebran Elementary "Create a Bridge"
- Zachary Reid, Victory Christian Center "Does Team Name Equal Superbowl Wins"
- Rhys Bonnin & Brianna Claspell, Woodland Heights Elementary "Graphs and What They Are Used For"

6-8 Winners

- First Place:* Tayler Lail, Startown Elementary—"Deer, Oh Deer, Oh Deer"
- Second Place:* Gabriel Moore, Victory Christian Center "Santa Claus: Really?"
- Third Place:* Anthony Winkelman, Mount Mourne IB—"Pi Please"
- Honorable Mention:* Lucas Kelly, Startown Elementary School—"Picture Perfect"
- Jay Gool, Victory Christian Center—"Price Comparison of Retail & Homemade"
- Stevie Sweeney, Victory Christian Center "Transformations on the Coordinate Plane"

9-12 Winners

- First Place:* Ayano Annis, Erwin High School—"Can You Hear It?"
- Second Place:* Stephen Scheuerle, Mt. Mourne IB—"Right Batters Income"
- Third Place:* Luan Nguyen, Victory Christian Center—"Hyperbolic Paraboloid"
- Honorable Mention:* Brandon Rogers, Victory Christian Center—"Fun Ride Leads To Math"
- Dequan Mitchell, Victory Christian Center—"Math Within Basketball"
- Hannah Cook, North Iredell High School—"Roadway Geometry"