

**CASMEO
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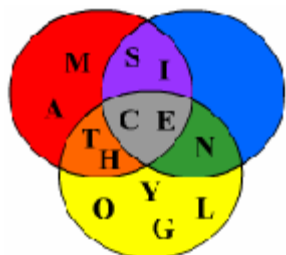
A nonprofit organization

The Apothem

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Special points of interest:

- Report of Spring 2003 Forum
- No Child Left Behind (NCLB) news
- Ways to use data in teaching mathematics in middle schools
- Join CASMEO legislative outreach
- Check the CASMEO website for Professional Development opportunities

The CASMEO Executive Board met on 28 July 2003 at Lincoln Park Zoo. Jan Sands read the minutes and Dr. Robert Howard of the University of Tulsa and CASMEO treasurer reported that the current balance is \$14,736.41. According to Dr. Howard, most of these funds are expended on the annual summit. Dr. Sandy Johnson, President, reported on website development and the annual newsletter. Additional committee reports were given. Nomination and election of interim Vice President and interim board members were conducted. Mary Stewart was elected as the interim Vice President and Cindy Koss was elected to represent the Oklahoma State Department of Education.

Dr. Sacra Nicholas, Executive Director, gave a summary report on the activities of the organization for the year. These included participation at national level meetings including the National Alliance of State Science and Mathematics Coalitions

(NASSMC) Board of Directors and Annual Conference, the Triangle Coalition for Science and Technology Education National Conference and the Association for State Supervisors of Mathematics annual meeting. Dr. Nicholas also reported that CASMEO will have representatives attending the Fall Forum in Little Rock, Arkansas, 3-5 September 2003 hosted by the Southwest Educational Development Laboratory (SEDL).

This year CASMEO sponsored or assisted in a number of large grant activities including the application and award of a CASMEO/TU No Child Left Behind grant for \$91,139. Dr. Nicholas also participated in a Teacher Mathematics/Pedagogy Assessment Instrument Camp conducted by well-known researcher/mathematics educator, Deborah Ball in Ann Arbor, Michigan. Information gained from this workshop was used to help the CASMEO/TU grant be more competitive. In addition to sub-

mitting this grant, Dr. Nicholas also served as the CASMEO consultant to the Region VII Comprehensive Center and the OU Center for Early Childhood as they crafted a national pre-school curriculum evaluation grant proposal titled "Math Matters."

At the state level, the Oklahoma Council of Teachers of Mathematics (OCTM) conference and board meeting was attended by CASMEO representatives. Other summer activities included the Oklahoma State Department of Education conference and the OSU Science/Math Integration Institute. Many other activities can be investigated on the CASMEO website at

<http://www.casmeo.org>.

The Executive Committee ended their meeting by revisiting the long-range goals and action plan established during the fall 2000 Linking Leaders

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Executive Board Meeting

CASMEO/TU Partner for NCLB Grant Funding

Good News! CASMEO partnering with the University of Tulsa received a NCLB grant for \$91,139 from the Oklahoma Regents of Higher Education titled - *Teacher Increased Content Knowledge Equals Student Achievement in Mathematics*. The purpose of this project is to increase teacher mathematics content knowledge using standards-based, researched-based curriculum as a vehicle to ultimately advance student learning in mathematics. The year long project supports K-8 teacher participants to develop leadership skills, prepare for National Board Certification, and form collaborations with higher education faculty as a way of building stronger bridges between

communities of higher education and common education. During June 2003, sixty-nine teachers attended four-day institutes where they began working on their content knowledge, analyzed standards-based/research-based math curriculum and selected two lessons that they have agreed to teach. They will submit videotapes of these lessons for analysis (one in the fall and one in the spring 2003-2004). Teachers filled out an educational leadership checklist based on the National Board for Professional Teaching Standards Five Core Propositions. Based on this checklist they set three personal goals to work on throughout the year.

Assessment and analysis of student work was discussed, and WebCT was introduced and demonstrated. This is an online course/istserv teacher participants will be using to post bi-monthly reflections and assignments as they continue to increase their content knowledge. They also studied the Japanese lesson study process as described in *The Teaching Gap* and will be applying what they learned with guidance from university consultants as they participate in two demonstration lessons to be held in classrooms of the teacher participants in the fall 2003 and again in the spring 2004.

Highlights of NASSMC/NASA Annual Meeting

What Makes Coalitions Successful?

William Steeken, President of the National Alliance of State Science and Mathematics Coalitions (NASSMC) spoke at the annual meeting held at the Maritime Institute of Technology in Baltimore on 1-2 April 2003. President Steeken gave an overview of the key issues impacting state coalitions as determined by the preliminary findings of a phone survey of state coalition members. The survey was conducted in the winter/spring of 2002/2003. Findings indicated that communication, collaboration, coordination and consensus are essential elements for a strong state coalition. Qualities of productive coalition members include an understanding of education issues, perseverance, patience, and passion. According to President Steeken, successful coalitions should involve statewide, systemic, sustainable, and collaborative efforts. It is essential to strive for public awareness of the importance of mathematics and science literacy, the economic value of literacy, and the impact of literacy on national security.

Success = 4C
Communication
Collaboration
Coordination

No Child Left Behind News

No Child Left Behind (NCLB) legislative update was given by Dr. Susan Sclafani, counselor to the U.S. Secretary of Education. The goal of NCLB legislation is to insure that, based on each state's standards and assessments, all students are proficient in reading and mathematics by the year 2014. The legislation became law on 2 January 2002. States must implement statewide accountability systems covering all public schools and all students. The NCLB Act also increases the choices available to parents whose children attend schools that fail to meet state standards.

Greater flexibility in the use of Title V innovative funds provides opportunities for implementation of activities that ensure that every child can read by the end of the third grade. Employment of highly qualified teachers and the use of research-based curriculum are also components of the NCLB Act.

Dr. Sclafani also discussed the Secretary of Education's Math and Science Initiative formulated on February 6, 2003. Goals of the initiative are to engage the public in recognizing the need for better mathematics and science education, initiate a campaign to recruit, prepare, train, and retain teachers with strong backgrounds in mathematics and science, and develop a research base to improve our knowledge of what boost student learning in mathematics and science. Information can be downloaded at

www.ed.gov/inits/mathscience.

NASA'S Education Enterprises

Dr. Adena Williams Loston, Associate Administrator for Education at NASA Headquarters in Wash. D. C. discussed efforts to motivate students to pursue Science Technology Engineering and Mathematics (STEM) careers, to provide quality professional development for teachers, to engage minority teachers and students in mathematics and science, and to invest resources carefully. Dr. Loston also described other NASA programs such as Explorer Schools, Explorer Institutions, and the Educator Astronaut Program. For additional information visit the website <http://www.education.nasa.gov>.

National Grant Opportunities

Dr. Janice Earle, Senior Program Director, Division of Elementary Secondary, and Informal Education (ESIE) from the National Science Foundation spoke regarding the status of the second round of proposals submitted in the Math and Science Partnership (MSP) program. This program was created to support the NCLB Act by uniting teachers and administrators in K-12 schools, mathematics, science, and engineering faculty in colleges and universities, and other stakeholders in K12 education to improve student outcomes. The program seeks to enhance the quality and diversity of the mathematics and science teachers and raise achievement scores of all students.

New Science and Mathematics Education initiatives should raise interest and capabilities of teachers and students.

MSP projects are also expected to reduce achievement gaps among segments of students populations. The success of partnerships between states and institutions of higher education are

linked to accountability goals that measure important indicators such as student performance on state assessments, increasing participation of students in advance courses in mathematics and science. Increasing the numbers of teachers that major in mathematics or science is also a goal of the MSP program. For additional information visit the website <http://www.ehr.nsf.gov/msp>.

September
Math and Science
Month
<http://www.casmeo.org>

CASMEO/SEDL Summit Report

CASMEO held its third annual mathematics and science education summit on 10 January 2003 at the Langston University Campus in Oklahoma City. Approximately 80 people attended. The theme this year was, Bridging the Gap by Building High Impact Partnerships." Capital Steps Co-founder and author William Strauss was the keynote speaker. Participants were challenged to ponder some of the patterns and cycles in history as they relate to current issues and to consider the role partnerships can play in response to the changes in our world. Each participant also received a copy of Strauss' book *An American Prophecy—The Fourth Turning*. South-

west Educational Development Laboratory Consultant (SEDL), Maria Torres, facilitated a session on developing high impact partnerships addressing such issues as: What makes a partnership high impact? What are some of the roadblocks to forming and maintaining these types of partnerships? and What can we do to facilitate high impact partnerships? To address partnerships from a statewide perspective, Dr. Cindy Koss, Oklahoma State Department of Education, addressed some of the key points in the new No Child Left Behind Act. Susan Brown, Southwest Oklahoma Consortium Technical Preparation Coordinator

and Robin Schott, Oklahoma Department of Career and Technology Education outlined some of the model partnerships in place across the state that bring together community colleges, career technology, public schools and business. Afternoon regional partnership meetings provided a more focused opportunity for participants to share and continue to strengthen connections with others. Co-sponsors for this summit were Southwest Educational Development Laboratory (SEDL) in Austin, Texas, NASA Aerospace Professional Development Center at OSU, and Oklahoma NASA Grant Consortium at OU.

CASMEO Board of Directors

The Board of Directors was revised in January 2003. The Board of Directors and their respective affiliations are:

Julie Angle

OK Science Teachers Assoc.

Linda Bailey

Math Consultant

Dr. Debbie Blue

OBU/Oklahoma Board of Education

Dr. Belinda Biscoe

Oklahoma City Public Schools

Tom Carlisle

ConocoPhillips

Dr. Floyd Coppedge

Former Secretary of Education
Oklahoma Christian University
Professor of Education

Dr. Joy Culbreath

Choctaw Nation

Dr. Vicki Dimock

Program Manager, SEDL

Dr. Victoria Duca-Snowden

OK NASA Space Grant

Dr. Jayne Fleener

University of Oklahoma

Ted Gillespie

OCTP

Tom Gruber

Office of the Attorney General

Dr. Phyllis Hudecki

OK Business Education Coalition

Darlene Johnson

OCTM President

Dr. Sandy Johnson

CASMEO President
University of Oklahoma (Retired)

Cindy Koss (Interim)

Ok State Dept of Education

Mike Lapolla

OSU College of Osteopathic Medicine

Dr. Ken Lease

OK School of Science and Mathematics

Karen Leveridge

Business Consultant

Belinda McCharen

OK Dept of Career Tech Education

Dr. Dolores Mize

OK State Regents for HE

Patricia Podolec

Business Consultant

Rep. Larry Roberts

OK House of Representatives

Dr. Suzanne Spradling

OK Building a Presence for Science

Dr. Doug Sprung

University of Central OK

Dr. Alfred Striz

University of Oklahoma

Dr. John Ulrich

Aerospace PD Center

Dr. John Woods

Southwestern Ok State University

CASMEO Representative Attends National Conference

Stacey Weinand attended the Triangle Coalition for Science and Technology Education National Conference entitled "Informing Policy in Support of Mathematics, Science, and Technology Education" on 3-4 March 2003 in Washington, D.C. One hundred thirty-seven participants from 33 states and the District of Columbia attended the two-day conference held on Capitol Hill. Conference participants were provided with information about federal programs supporting Science, Technology, Engineering, and Mathematics (STEM) education. Participants heard from congressional staff members about upcoming legislation and the legislative process. Triangle Coalition focuses its action in three major areas: advocacy, communication, and programmatic efforts to advance science mathematics, and technology education for all students.

Using Data to Improve Oklahoma Student

In partnership with Southwest Educational Development Laboratory (SEDL), CASMEO sponsored a series of workshops to support educators in the use of data to analyze and drive educational decisions based upon principles outlined by well known authors in the field such as Mike Schmoker, Victoria Bernhardt, and Nancy Love. These workshops have inspired a variety of implementation strategies across the state. For example, Linda Bailey, one of our CASMEO/SEDL Data consultants has been working with a school in Lawton and reports, "We will use the two years of data to target the areas where the most need is shown. I have found that showing improvement and strengths to teachers is much more positive than just (showing) the weaknesses." Another con-

sultant, Susan Powell, Technology Coordinator for Ponca City Public Schools, reports that her district has developed a multi-faceted approach to using data to drive decisions. Some of the actions Ponca City Schools have taken is to use SASI and Score Analyzer to improve their ability to house, report, and disaggregate data. In particular, they have imported Explore, Plan, Otis Lennon, GATES, and Criterion Reference Test (CRT) data into SASI. As a result, the algebra teachers will be able to access test information on the first day of school enabling them to determine student needs and adjust instruction early in the school year. Ponca City Schools, Tulsa Public Schools, and the SASI Users Group have also worked diligently with the Oklahoma State Department of Education to provide electronic EOL test results for a small fee.

"The primary question was not what do we know, but how do we know it."- Aristotle

Family Adventures with Mathematics, Engineering, and Science

Family Adventures in Mathematics, Engineering, and Science (FAMES) is a project created for parent groups and the community to increase awareness of the importance of early childhood experiences as a foundation for mathematics, engineering and science concepts. FAMES was created by CASMEO representatives from the education and business sectors

working to support and coordinate efforts to revitalize mathematics and science education in Oklahoma.

Partners with CASMEO in the FAMES project are OSRHE, SDE, O-PTA, and SEDL/SCIMAST.

In June 2002, CASMEO partnered with Borders Book Store in three locations as part of Camp Borders Explorers. Children

ages 4 to 10 participated in a variety of hands-on science experiences facilitated by Stacey Weinand in Norman, Julie Howell in Oklahoma City, and Mary Stewart in Tulsa.

Once again CASMEO partnered with the Oklahoma Department of Libraries (ODL) to develop another Family Adventures kit. URL <http://www.odl.state.ok.us/fames/>
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