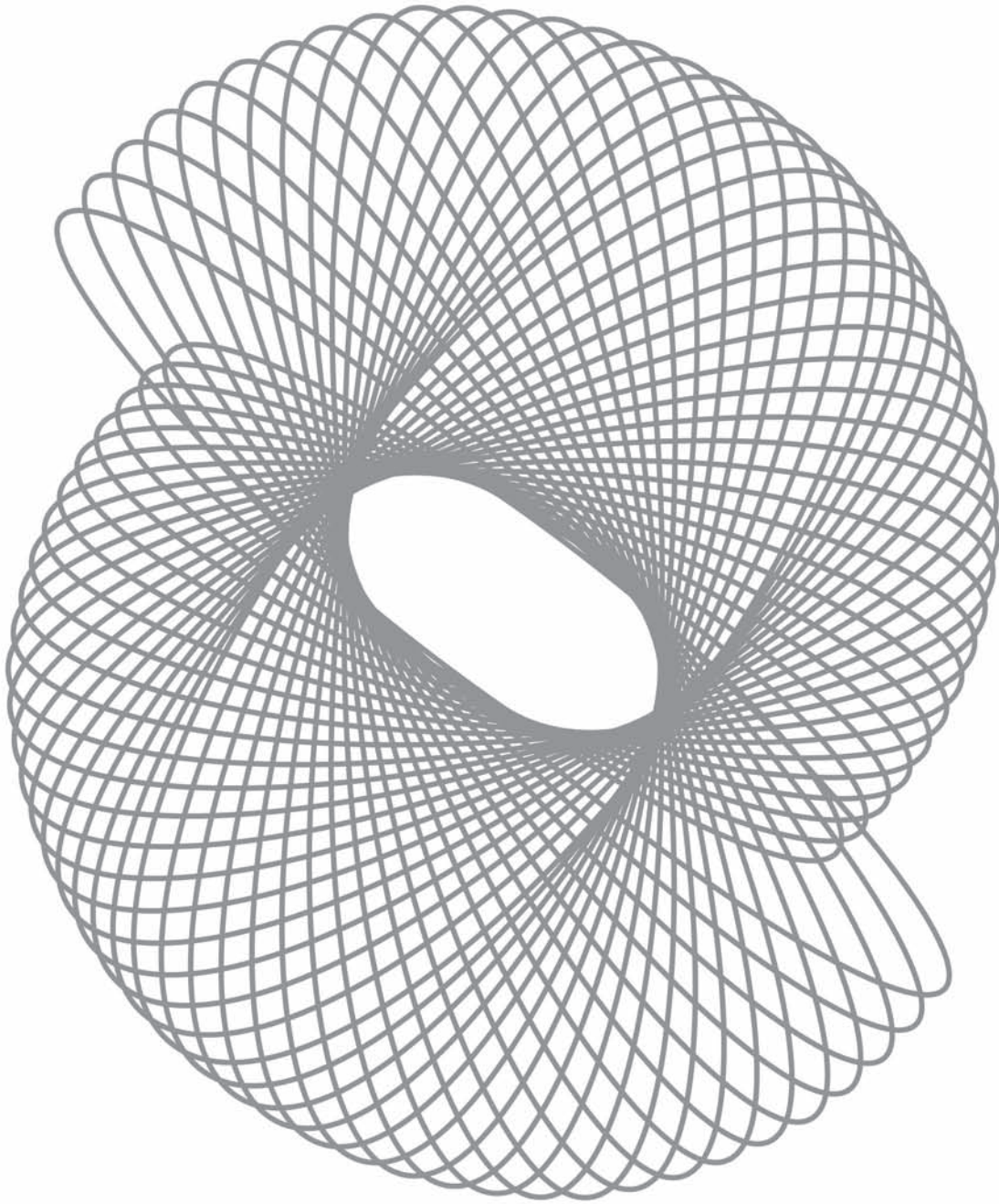


LINKING LEADERS

Community for Change:

Celebrating Ten Years



nasa

science

technology

engineering

mathematics

education

nassmc

LINKING LEADERS HISTORY

The Education Challenge

In the mid 1990's, worrisome gaps were identified in the mathematical, scientific, and technological literacy of the U.S. population. Issues such as the under-representation of women and minorities in technical fields, student performance on international assessment instruments, and student readiness for the workplace emerged as critical weaknesses of the U.S. system. In conjunction, state educational standards for almost every subject became a nationwide trend.

The Perfect Partnership

During this time, the National Aeronautics and Space Administration's (NASA) Educational Office concluded that a monolithic, one-size-fits-all model was inappropriate and ineffective for supporting technical education across America. NASA's education leadership sought to support the source of a coherent voice for the states' improvement agendas.

The National Alliance of State Science and Mathematics Coalitions (NASSMC) provided NASA with the perfect partnership opportunity. Initially formed in 1994, NASSMC grew out of a project sponsored by the Mathematical Sciences Education Board of the National Research Council. The purpose of NASSMC was to bring state coalitions of business, education, and policy leaders under one national umbrella. NASSMC set out to develop strategies to strengthen existing coalitions while at the same time building new ones.

Linking Leaders Emerges

The Linking Leaders program was established by NASA in collaboration with NASSMC. This partnership provided the ideal vehicle to support the separate and diverse reform efforts of individual state coalitions as a strategy for systemic change. NASA's commitment to education is based on the support of each state's education vision. If the sectors of education, state government, and business share a collective vision, then NASA resources can be aligned to support it. On the other hand, if education, policy, and business leaders are all working hard but at cross-purposes to improve education, then the vector sum of their efforts may be zero.

Linking Leaders for Systemic Reform was launched in 1995 and the first Linking Leaders Workshop was held in Cleveland, Ohio in 1996. With the assistance of NASA funding, NASSMC has extended the Linking Leaders program to twenty-three states. In addition to building new coalitions, the program has evolved in recent years to offer specialized support and technical assistance to the older, more well-established coalitions. Now called Linking Leaders for Systemic Improvement, the program has changed the dynamics of NASA's interaction with the states and has led directly to the establishment of coalitions in four states where no organization existed prior to the NASSMC/NASA presence.

From Linking Leaders I in 1996 to Linking Leaders IX in 2004, the program has been conducted in the states of Alabama, Colorado, Florida, Idaho, Illinois, Iowa, Kentucky, Maryland, Minnesota, Mississippi, Nebraska, New Hampshire, New Mexico, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

NASSMC HISTORY

The National Alliance of State Science and Mathematics Coalitions (NASSMC) is an umbrella organization for state coalitions of business, education, and public policy leaders united for the improvement of mathematics, science, and technology education (MSTE) for all students. NASSMC is a network of thirty-seven state coalitions and serves as the national advocate for its member organizations.

Vision and Goals

A non-profit association, NASSMC works state-by-state in pursuit of its vision that all U.S. students will have the necessary knowledge of, understanding of, and skills in mathematics, science, and technology, so they can be productive in their personal, work, and civic lives. The nation will have a competent and competitive workforce that continues to meet the challenges of the global economy. NASSMC's member coalitions work to bring coherence and added value to the separate efforts of many individuals and organizations. Coalitions pursue goals not achievable by any one organization or sector working alone. All Americans need and deserve to receive the best possible education in mathematics, science, and technology for their personal and civic lives.

To this end, NASSMC performs a variety of beneficial activities:

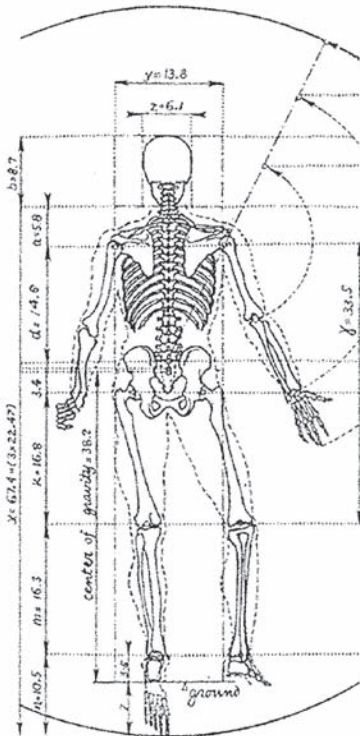
- Helping each coalition develop a state-specific strategy to improve mathematics, science, and technology education;
- Linking state coalition leaders to each other and to major national initiatives;
- Serving as the national ears and voice of its member coalitions;
- Providing a national forum for the discussion of critical issues relevant to continuous and systemic improvement of mathematics, science, and technology education; and
- Supporting timely dissemination of information relevant to the continuous and systemic improvement of mathematics, science, and technology education.

NASSMC's Development

NASSMC evolved from a 1989 project of the Mathematical Sciences Education Board of the National Research Council. For five years, the project focused on developing coalitions of state-level leaders committed to promoting adaptation and implementation of new state standards for school mathematics and later, science based upon national models. In 1994, directors of the state coalitions initiated by the project decided to establish NASSMC as a national nonprofit organization with headquarters in Washington, DC. At the direction of its Board, NASSMC adopted a larger mission of supporting its member coalitions in the promotion of systemic improvement of mathematics, science, and technology education for all students in grades K-16.

In pursuit of its mission, NASSMC has designed and executed projects testing processes and materials for strengthening the structure and programs of its member coalitions. In collaboration with the Education Commission of the States and the NASA, it has developed a state-based model for working with business, education, and policy leaders to address continuous improvement in school mathematics, science, and technology. NASSMC also established the NASSMC Briefing Service, an Internet-based service providing leaders across the nation with concise and timely information about programs, research results, and public opinion relating to mathematics, science, and technology education.

In August of 2002, NASSMC moved its offices to the National Science Teachers Association (NSTA) Building at 1840 Wilson Boulevard, in neighboring Arlington, Virginia. In this new location, NASSMC works in close proximity to the Triangle Coalition for Science and Technology Education and with the programs and operations of NSTA. The organization continues, through the efforts of its member coalitions, to support comprehensive and coordinated change in mathematics, science, and technology education and to promote public awareness and understanding of the need for such change.



The Coalition for the Advancement of Science and Mathematics Education in Oklahoma (CASMEO) is a state-level coalition of business, education, government, and parent leaders. CASMEO is committed to fostering state-level dialogue, collaboration, and coordinated efforts to promote the continued improvement of math and science education for every child in Oklahoma.

CASMEO began in December of 1990 as a project funded by the Exxon Education Foundation through the Mathematical Sciences Education Board. This original funding provided for the establishment of the Coalition For The Advancement Of Mathematics Education In Oklahoma (CAMEO). Science education representatives joined CAMEO in 1996 and the name was changed to CASMEO.

CASMEO is supported by a Board of Directors representing leaders from two nationally funded regional laboratories, all state education agencies, NASA and Space Grant Consortiums, business representatives, presidents of both the mathematics and the science state teachers associations, K - 16 teachers and professors, and others.

VITAL STATISTICS

Linking Leaders Class
2001 - 2003

Coalition Milestones
Founded - 1990

Website URL
www.casmeo.org



FEATURE STORY: *EDUCATING STUDENTS BY EDUCATING PARENTS*

Parents (including all caretakers that make up a child's nurturing unit) are the first, most consistent, and most influential teachers a child interacts with and thus play an indispensable role in a child's math and science learning.

In response to this fact, CASMEO partnered with the Oklahoma Department of Libraries summer reading project to create Family Adventures in Mathematics, Engineering, and Science (FAMES). FAMES seeks to improve parent/family involvement in math and science education. CASMEO provided approximately 200 libraries across the state with math and science theme bags containing books, materials, and a guide for parents to use with their children. Themes included bugs, space, shapes, and dinosaurs. CASMEO also produced a summer math and science activity calendar and most recently developed a program to promote

mathematics and science to parent organizations in the state.

Research shows that the single most important predictor of how well children do in reading is the amount of time their parents spend reading with them. Unfortunately, there is no comparable research on parents doing math or science with their children - but it stands to reason that there would be great educational benefits.

CASMEO offers a program to parent organizations and groups serving elementary grade children as a means to support and empower parents in their efforts to direct the learning of math and science. This short, half-hour program can be presented by anyone willing to study the instruction guide and gather the necessary handouts, materials, and posters.

COALITION RESULTS



In 1992, CASMEO secured funding to train a cadre of state leaders in the use of data to drive instruction in mathematics and science. The "Data Analysis Project" was a new way of thinking for educators in Oklahoma and as a result a great deal of additional professional development has been provided.



CASMEO created a searchable database of professional development providers of mathematics and science and is making this available for free via the Internet. This system assists schools and universities in the location of targeted professional development for their faculties in the subjects of mathematics and science.



CASMEO received attention statewide with a position paper on Algebra I that was published in the major statewide newspaper in the spring of 2003.



The Master Teachers Project was created when CASMEO partnered with the Southwest Educational Development Laboratory to do intensive training with a group of mathematics and science teachers in 1994. The project was eventually "adopted" by the Oklahoma State Department of Education.



CASMEO hosts a dynamic annual mathematics and science education summit that brings together 100-150 key stakeholders and leaders.

FUTURE GOALS

CASMEO has identified several goals for the years ahead:

- 1) Implement a plan of continuous improvement in mathematics and science education based on student results, research, and best practices.
- 2) Articulate a shared vision of quality mathematics and science education that has public understanding and support.
- 3) Build a leadership base to align efforts and strengthen Oklahoma's Mathematics Science Technology Education infrastructure and sustain statewide systemic reform.
- 4) Support a coherent education policy and act as advisors to policymakers - including the Governor, State Education Committee, Legislators, State School Board, and others.
- 5) Promote CASMEO as "Keeper of the Vision" and "Facilitator of the Process."
- 6) Continue associations with national organizations like NASA/NASSMC and the Triangle Coalition to effectively leverage mutual resources.

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LESSONS LEARNED

The leadership in CASMEO has become more aware of the importance of including policy makers when making decisions or taking action on behalf of the Coalition. Other state coalitions have shared some of the strategies they have developed in this area. This insight and knowledge has been most helpful.



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