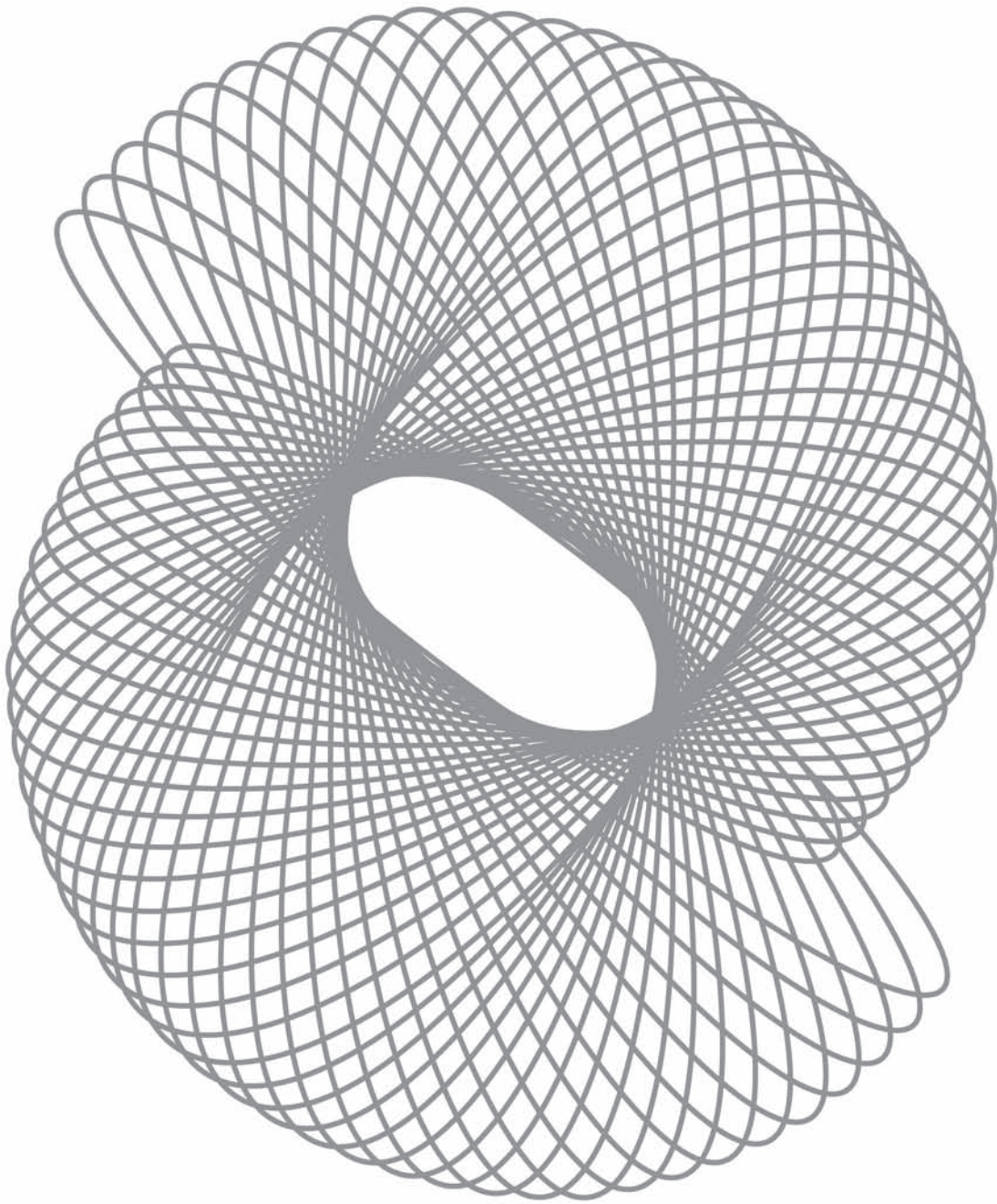


# LINKING LEADERS

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 first effort to form a coalition in Ohio began in 1989 when the Mathematical Sciences Education Board (MSEB) of the National Research Council (NRC) launched the State Mathematics Coalition Project. The first Ohio Mathematics and Science Summit was held using MSEB funding.

In 1990, the Ohio Department of Education (ODE) and the Ohio Board of Regents (OBR) placed mathematics and science education improvement at the top of their agendas. Over the next five years, there were efforts to oversee and coordinate several innovative, but somewhat disconnected, improvement efforts within the state.

The presidents of Ohio's various mathematics and science professional associations met together for the first time in November of 1993. After considerable discussion, this group (called the Council of Presidents) agreed to create an independent organization. The Ohio Mathematics and Science Coalition (OMSC) was formed and became an advocate for the improvement of Ohio's mathematics and science education system. OMSC also established a network of key stakeholders from education, business and industry, and government. Forty-one leaders from across the state were invited to join as coalition members.

## VITAL STATISTICS

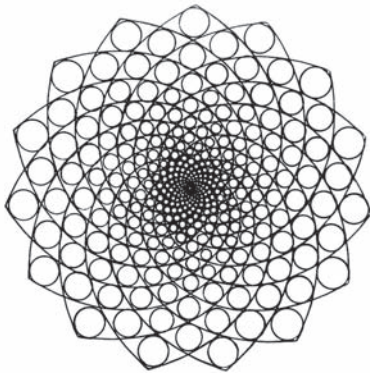
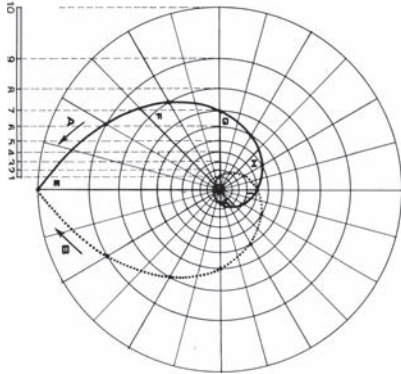
Linking Leaders Class  
1996

Coalition Milestones  
Founded - 1995

1st Executive Board Mtg.  
June 2, 1995

1st Statewide Mtg. of  
Coalition Members  
October 27, 1995

Website URL  
<http://www.oai.org/OMSC>



## FEATURE STORY: A STATEWIDE VISION AND AGENDA

In October of 2001, the Ohio Mathematics and Science Coalition created and released its vision document, *Finding the Solution: A Call for Collaboration* (Bringing Mathematics and Science Education Into the 21st Century). Several years of commissioned research and published reports culminated in the creation of this vision document.

The *Finding the Solution* vision document addressed five key initiatives that are the focus of OMSC's activity:

- 1) Implement learning standards that are research-based and professionally recommended;
- 2) Implement research-based curricula and assessments;
- 3) Provided an adequate number of qualified and empowered teachers, supported by the necessary resources;
- 4) Commit to shared accountability and

- responsibility by all stakeholders; and
- 5) Align the system of standards, curricula, instruction, assessments, and accountability measures.

To move Ohio toward this vision, OMSC built a network of relationships at the policy level via meetings and presentations to key stakeholder groups. OMSC has more than fifty members.

Representation in OMSC includes business and industry members, educators, government liaisons, and organizations such as: Ohio Council of Teachers of Mathematics, Science Education Council of Ohio, Ohio Education Assoc., Ohio Dept. of Education, Ohio Board of Regents, Ohio Resource Center, Governor's office, and the Wright-Patterson Air Force Base. OMSC members have been extended a seat on the Board of many of these key organizations.

## COALITION RESULTS



In the summer of 2004, OMSC was selected by the Ohio Department of Education to create training for school principals that focused on their role in implementing Ohio's mathematics and science content standards. OMSC coordinated the work of four regional consortia to successfully design and deliver (at no cost to participants) training sessions for 100 principals from schools designated as "academic watch" or "academic emergency" by ODE.



OMSC provided support to the Ohio Department of Education's efforts for Ohio to become a National Assessment of Education Progress (NAEP) state in 2000 by aggressively encouraging school districts across

the state to participate in NAEP. NAEP results now provide OMSC with strong comparative data that informs Ohio's mathematics and science improvement efforts. In other supporting work, OMSC has developed and issued position statements on many topics that continue to define a vision for improved mathematics and science education in our state.



Since 2000, OMSC has held four "Legislative Statehouse Days." These presentations, held in the Atrium of the Ohio Statehouse, inform Ohio's legislators of the continuing need for collaborative and aligned efforts, the breadth of OMSC's network, and the work of the organizations that fall under OMSC's umbrella.

## FUTURE GOALS

OMSC has identified several goals for the years ahead:

- 1) Within two years, OMSC wants to organize and conduct a state mathematics and science summit conference that involves key leadership from government, business and industry, Pre-K through 12 and higher education, and Ohio community groups. The agenda of this summit will be to develop, implement, and support a long-term plan for improvement of mathematics and science education in Ohio.
- 2) Within the next fiscal biennium, OMSC will implement a consistent strategic planning format that will be used by OMSC, the Ohio Board of Regents, and the Ohio Department of Education to inform the governor and state legislature of the goals, research base, action steps, deliverables, and costs needed to improve Ohio's mathematics and science educational system.
- 3) Through support from the NASA Explorer Schools program and NASSMC, OMSC will conduct a pilot community outreach campaign in Lorain, Ohio - an urban community with a diverse population. Simultaneously, this pilot program will provide training to teachers and administrators at Lorain Middle School. OMSC hopes these results can be used to model improvement activities for other districts.

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Terry Krivak  
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## LESSONS LEARNED

The success of Kentucky's ideaFestival has caused OMSC to follow some similar steps, the most essential being the establishment and coordination of ongoing communications among key stakeholder groups that can contribute to systemic improvement.



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