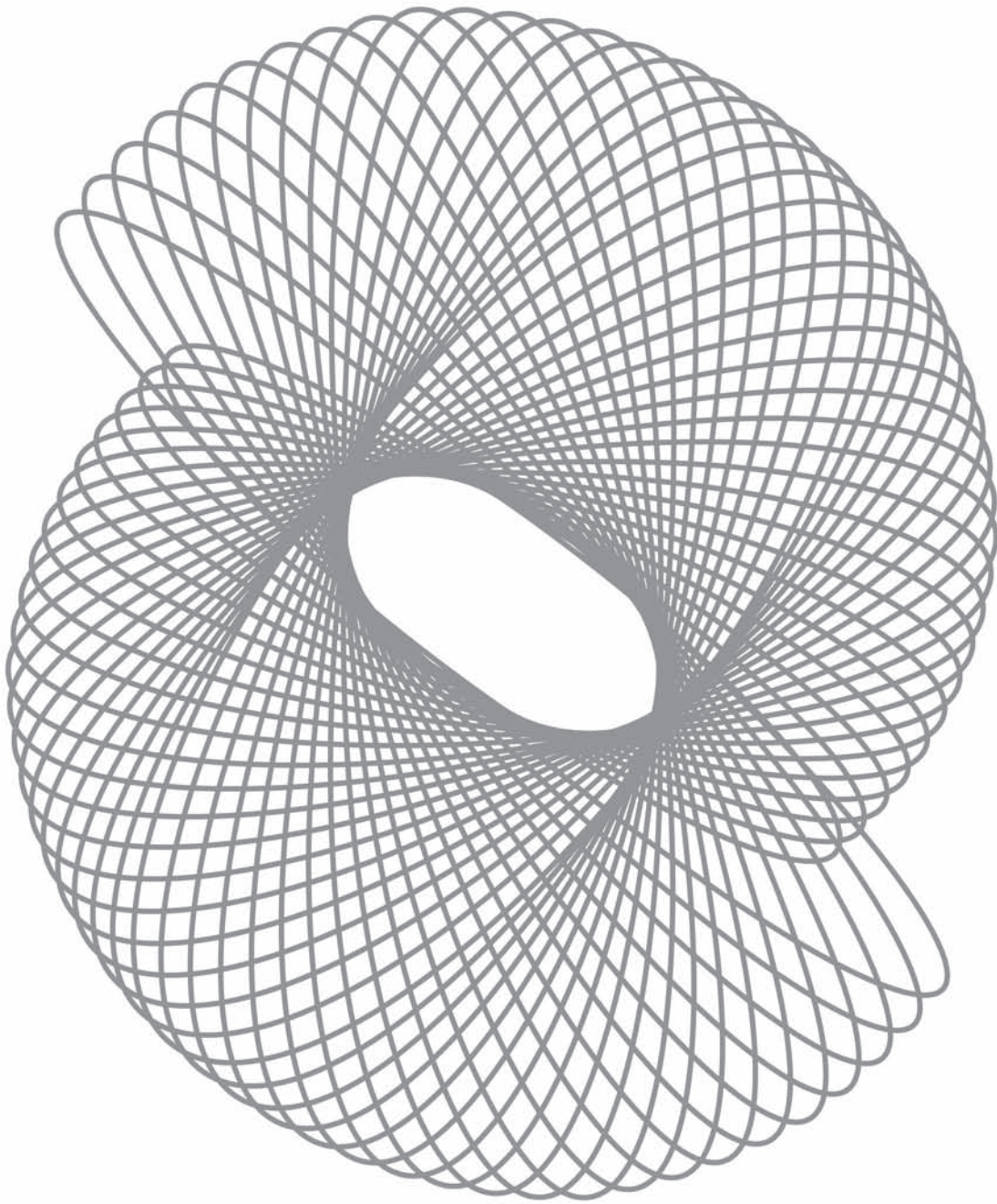


# LINKING LEADERS

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.

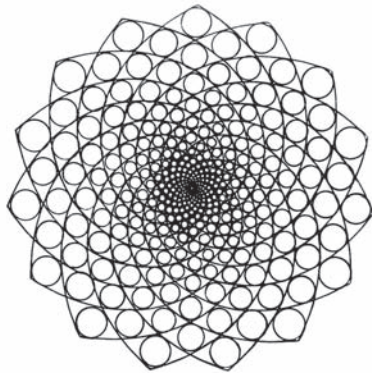
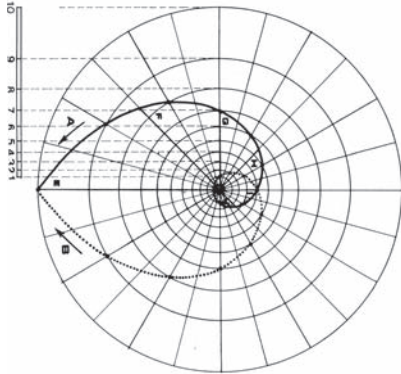
In pursuit of its mission, NASSMC has designed and executed projects testing processes and materials for strengthening the structure and programs of its member coalitions. In collaboration with the Education Commission of the States and the NASA, it has developed a state-based model for working with 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 concentration of economic resources in the northern areas of West Virginia has resulted in highly localized and inequitable opportunities in mathematics, science, and technology education within the state.

In 1990, through generous support of the Exxon Foundation, the West Virginia Mathematics and Science Coalition, Inc. (WVMSC) was established as a statewide support group for the "Leading Mathematics into the 21st Century" initiative. The group began, in part, to address the geographic inequities and to seek a way to serve the needs of all students in the state. As time passed, science - and then technology - were added as focus areas. At the same time, efforts were undertaken to promote systemic change within the state for all students in grades K-16.

National Science Foundation funding of Project CATS (Coordinated and Thematic Science), a comprehensive statewide systemic reform effort, led to the establishment of eight regional consortia. Many of these groups have made great strides toward identifying and addressing the needs of their local communities. Involvement of business/industry leaders and policy makers has been helpful but sporadic, leading to a goal of more actively involving those sectors.



## VITAL STATISTICS

Linking Leaders Class  
1999 - 2001

Coalition Milestones  
Founded - 1990

Incorporated - 1993

Website URL  
Not applicable



## FEATURE STORY: NASA'S SYSTEMIC NEW WORKSHOP

West Virginia served as the pilot for NASA's Systemic NEW workshop held at NASA Langley in August of 2001. Each of the Coalition's eight regional consortia sent a team of three people - representing educators, business leaders, and policy makers - to ensure that all voices would be heard. The theme of the workshop was Understanding Systems, with the program built around NASA expertise in systems design and program management. These techniques were examined as a model for systemic improvement in education. Additionally, the workshop reinforced the regional leadership network and encouraged greater use of both NASA resources and the state's education service centers.

The pilot NASA Systemic NEW workshop marked one of the first times that all parts of the state were represented in all three areas - education, business,

and public policy. The workshop helped participants to recognize that no matter where they came from or what their background was, the goal of education reform was mutual.

The week-long NEW workshop was an opportunity for each of the eight consortia to meet with each other and as a combined group. Regional issues needs were discussed, and each group developed a strategic plan of action that included goals and milestones. Input from NASA Langley personnel, in particular Bill Williams, was extremely valuable as the groups considered a systems approach to their issues. Langley tours broke up the work sessions and enabled participants to see how math, science, and technology can be applied in a variety of situations. A stroll through a wind tunnel will do wonders to elicit enthusiasm!

## COALITION RESULTS



The co-sponsorship of the annual Governor's Reception to honor Presidential Awardees for Excellence in Mathematics and Science Teaching has provided a high-level of visibility for the Coalition. The West Virginia Mathematics and Science Coalition has joined the West Virginia Department of Education in co-sponsoring state-level recognition of the West Virginia nominees for the Presidential Awards for Teaching. Modeled after the White House receptions for national awardees, the state-level event begins in the East Garden of the Governor's Mansion where awardees are joined by their families, county school superintendents, and principals. A reception is then held in the Governor's Mansion.



The growth and involvement of the eight regional consortia best symbolizes the West Virginia Mathematics/Science Coalition. Most of the regional consortia have evolved into functioning organizations that have worked tirelessly to address the needs of their particular regions. As the leading groups succeed, the others have recognized their value and have begun their own grassroots work.

## FUTURE GOALS

WVMSC has identified several goals for the years ahead:

- 1) Strengthen the membership base to include more representation from business and policy-makers
- 2) Secure sufficient funding to employ an executive director - at least on a part time basis.

These goals go hand-in-hand. Having a paid executive director ensures uninterrupted efforts to grow the Coalition, which in turn, ensures continued funding for the executive director and for expansion of activities.

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West Virginia  
Mathematics  
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## LESSONS LEARNED

Seeing the success of other coalitions and having such outstanding support from NASSMC has been strong motivation for a volunteer-driven Coalition. Coalition projects and funding successes of other state coalitions have served as additional inspiration. The West Virginia Coalition can see that others are doing the kind of work that West Virginia aspires to do, and that there is ongoing support to help achieve a high level of success.



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