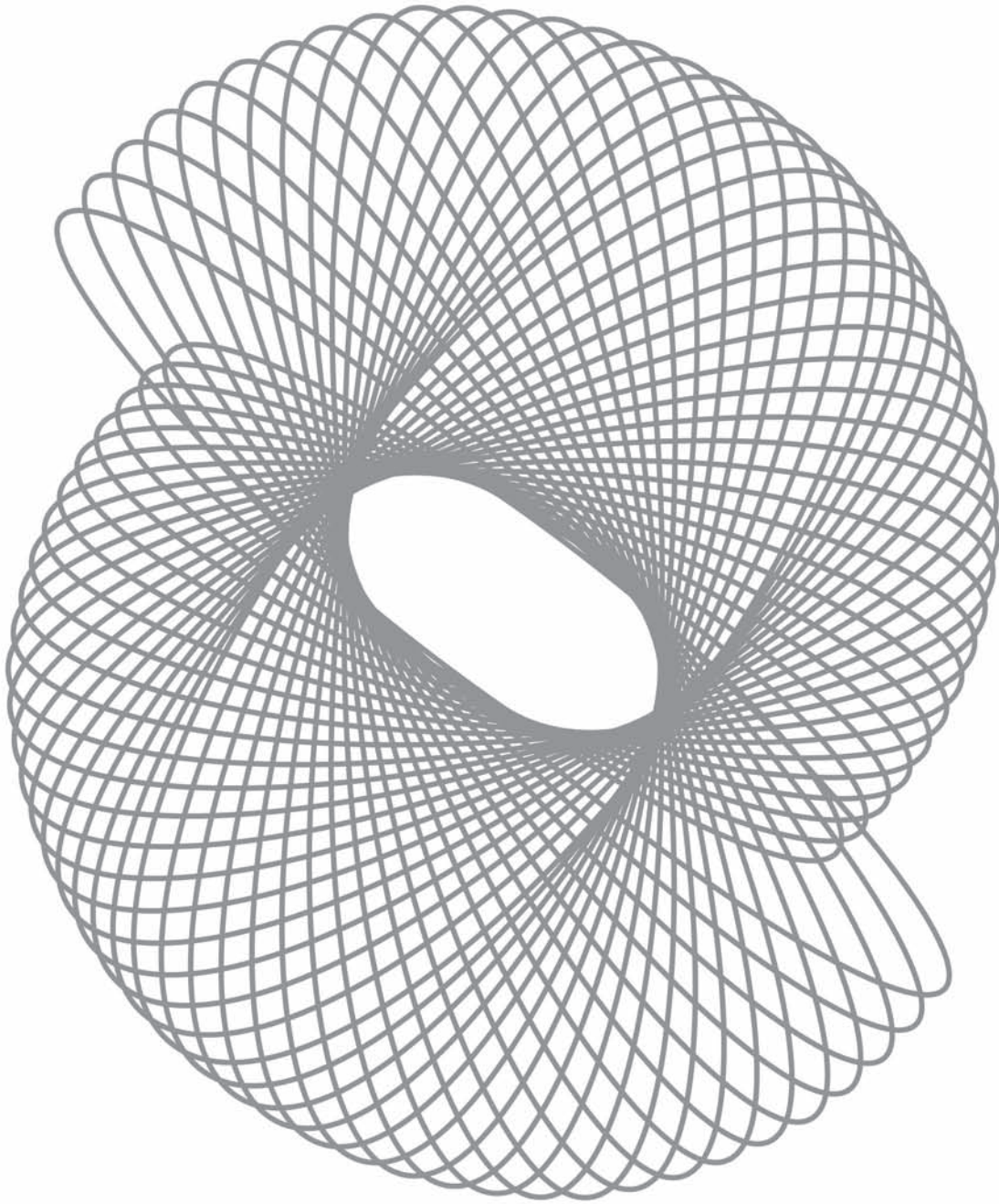


LINKING LEADERS

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:

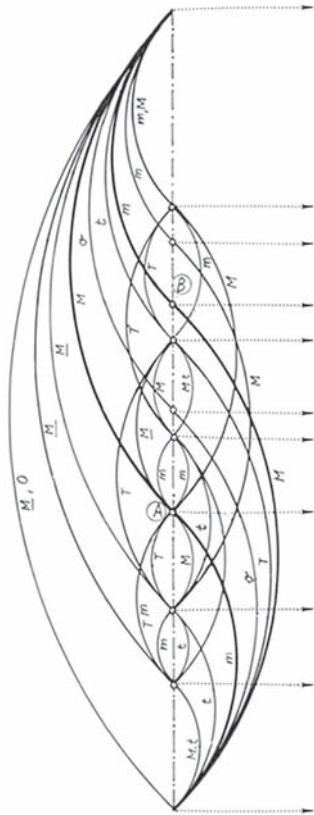
- Helping each coalition develop a state-specific strategy to improve mathematics, science, and technology education;
- Linking state coalition leaders to each other and to major national initiatives;
- Serving as the national ears and voice of its member coalitions;
- Providing a national forum for 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 New Hampshire Mathematics, Science & Technology Coalition (NH MaST) believes that it can make a tangible difference in the efforts to improve math, science, and technology education for all students in New Hampshire.

NH MaST was originally formed to:

- 1) Encourage and facilitate dialogue among the personnel of New Hampshire school districts, institutions of higher education, the corporate and business sector, government, and the public;
- 2) Promote and foster projects throughout the state which are designed to improve the quality of education and strengthen the specific skills associated with mathematics, science, and technology education; and
- 3) Serve as a vehicle of communication for the citizens of New Hampshire interested in these goals.

VITAL STATISTICS

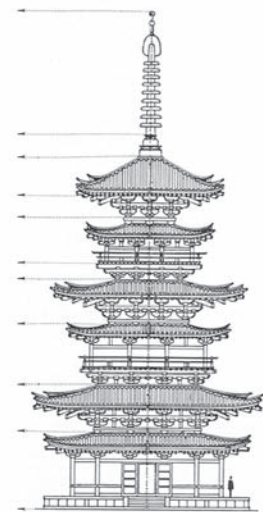
Linking Leaders Class
1998

Coalition Milestones
Founded - 1988

Incorporated as Nonprofit
1992

Constitution Adpoted
1996

Website URL
Not applicable



FEATURE STORY: MENTORING FOR THE FUTURE

Partnering with the Maine Math & Science Alliance and the Vermont Institute in the NSF, NHMaST funded the Northern New England Co-mentoring Network (NNECN) in 2001.

NNECN is designed to help schools support new teachers who are recent graduates of a teacher preparation program, teachers that were recently assigned to work outside of their certification area, and teachers who have entered teaching through alternative certification routes. The goal of NNECN is to support, nurture, guide, and retain these teachers while simultaneously elevating the professional learning of experienced teachers in order to improve the quality of all teachers.

In September of 2004, NH MaST received an e-mail

that explains the spirit of the program:

“During the summer institute, I mentioned to you an idea ... about mentoring 6th grade teachers who need HQ status in middle school mathematics. . . [W]e have developed an HQ mentoring plan with our curriculum specialist . . . We each have three to four 6th grade teachers we are mentoring . . . We have already had meetings with these teachers and have planned professional development activities to do with them using the NNECN resources.”

Even though this approach was not specifically envisioned by NNECN, it certainly followed the program’s spirit. The coalition, acting as catalyst, does not dictate solutions: it encourages creative approaches like the program started by these teacher-mentors.

COALITION RESULTS



In May of 2000, NH MaST hosted a Linking Leaders statewide meeting. This meeting showcased the willingness of dedicated volunteers to input time and energy toward improving STEM education despite a lack of resources.



In 2001, via a partnership with the Maine Math & Science Alliance and the Vermont Institute in the NSF, NH MaST funded the Northern New England Co-mentoring Network (NNECN).



In 2003, NH MaST conducted the "Surveys of Enacted Curriculum" - enabling the State Department of Education to evaluate instructional practices in a large sampling of New Hampshire classrooms. This was accomplished via a survey instrument from the Council of Chief State School Officers (CCSSO). The survey was pre-tested by the Coalition in several New Hampshire schools. The results of the teacher-completed survey are proving useful to individual teachers in analyzing their teaching methods, correlating this with their students' subject matter attainments, and improving their personal development programs. Education supervisors and policy makers have also found the data valuable in planning and assessing school policies, curriculum standards, and development programs.

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Dr. Karen Graham
NH MaST Treasurer
Department of Mathematics
University of New Hampshire

Jeanne T. Gerulskis
NH MaST Secretary
Christa McAuliffe Planetarium

Douglas Heuser
NH MaST Executive Director

FUTURE GOALS

NH MaST has identified several goals for the years ahead:

- 1) Teach students the necessary mathematics, science, and technology skills to be effective and productive citizens in an ever-changing environment.
- 2) Inspire and equip educators to prepare students for life-long learning.
- 3) Recruit active partners in the business, government, and public sectors to help support mathematics, science, and technology education reform.

Goals for 2005

- 1) Identify and recruit more business partners to join the Coalition
- 2) Create a database listing all current Mathematics, Science, and Technology efforts in New Hampshire
- 3) Hold a state-wide summit for business, education, and policy leaders to facilitate conversations on education reform.

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LESSONS LEARNED

The tri-state NNECN Project stemmed directly from discussions with other state coalitions at the Annual Directors' Meeting in 1999. The program is the coalition's most successful endeavor to date.



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