



# ***NSRC LASER Initiative:***

*Year Three Cross-Site Report  
June 2000-May 2001*

*National Science Resources Center  
National Science Foundation*

## **Executive Summary**

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## KEY FINDINGS

Leadership and Assistance for Science Education Reform (LASER) is a five-year outreach initiative developed by the National Science Resources Center (NSRC). Selected by the National Science Foundation (NSF) as one of its National Implementation and Dissemination Centers, LASER receives critical financial support from the NSF; this is matched by registration fees from participating school districts, and contributions from corporations, private foundations, and four science curriculum publishers.

The NSRC's design for the LASER Initiative is centered on its work with eight regional sites. Through LASER, the NSRC offers individualized technical assistance, as well as a set of customized products and services, to help regional site leaders develop their capacity to assist local school districts establish and sustain quality, K–8 science programs.

This year's evaluation focused on the technical assistance programs at six sites: Alabama (AL), Oklahoma (OK), Rhode Island (RI), South Carolina (SC), Tri-State, and Washington State (WA).

At this time, all of the eight sites identified at the start of the grant remain active. However, in California, the LASER regional partnership is being reconfigured. The NSRC worked with a number of science education leaders and corporate sponsors to restructure the California site throughout the year. Because of this reorganization, interviews were not conducted in this region this year, and no California Technical Assistance Report was written.

The Southwestern Pennsylvania site withdrew from participation in LASER this year while the site leaders work locally to develop a new strategic plan for ASSET<sup>1</sup> and a process for continuing to fund their extensive work. This regional site is not included in this report.

## ROLE OF THE NSRC IN THE LASER PARTNERSHIP

The role of the NSRC is to “build capacity” for improving science education at the regional site level by helping regional leaders foster local reform initiatives, and working with client districts to initiate, implement, and sustain the implementation of quality, K–8

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<sup>1</sup> Allegheny Schools Science Education and Technology, Inc.

science education programs. The NSRC provides technical assistance through a range of programs, products, and services to the regions. The products include Phase I and Phase II events offered in collaboration between the NSRC and the regional sites.

During the past year, the NSRC has provided a broader range of technical assistance to individual sites, collaborating with regional site leaders to develop LASER products geared to their individual needs including three new Phase II events during 2000–2001. They have organized the following:

- **13 Phase I LASER events:**
  - 1 Developing a New Vision of K–8 Science Teaching and Learning Conferences
  - 5 regional Strategic Planning Institutes, as well as a National Strategic Planning Institute
  - 2 Regional Planning Meetings
  - 5 K–8 Strategic Planning Institute Faculty Meetings
- **7 Phase II LASER events:**
  - 2 Regional Site Leaders’ Networking Forums
  - 1 K–8 Science Curriculum Showcase
  - 2 Principals’ Symposia (new LASER event)
  - 1 National LASER Teacher Preparation Strategic Planning Institute for Improving the Teaching of K–8 Science (new LASER event)
  - 1 Developing a New Vision of K–8 Science Teaching and Learning Conference for Institutions of Higher Education (new LASER event)

The NSRC also provided:

- tools for assessing district progress
- individualized consultation to the regional site leaders around a variety of issues including leveraging funds, planning, networking, and proposal writing

Over the past three years, there is evidence that the LASER strategy for building regional capacity has been successful in a number of ways. LASER activities have helped site leaders:

- to make educators, scientists, and corporate and community members more aware of national efforts to improve K–8 science education and, specifically, the NSRC model for school district reform

*According to the NSRC’s most recent Technical Report (2001), 1,189 educators and community leaders attended a New Vision of K–8 Science Teaching and Learning Conference.*

- to provide district and community leaders opportunities to examine exemplary, standards-based curriculum materials  
*According to the NSRC's most recent Technical Report (2001), 592 teachers, administrators, and community representatives attended a K–8 Science Curriculum Showcase.*
- to initiate a strategic planning process with leadership teams from individual districts and consortia of districts within their regions  
*According to the NSRC's most recent Technical Report (2001), 207 LASER districts attended a Strategic Planning Institute.*
- to identify and develop a cadre of leaders within the regions that share LASER's vision of quality science education programs and have the knowledge and skills to support districts' work over time
- to provide opportunities for existing subregional organizations, higher education institutions, business and industry to examine the LASER approach, meet with colleagues, and consider/plan ways to collaborate with the regional site leaders and the targeted districts to share resources and expertise to meet project goals

## **ROLE OF THE REGIONAL SITES: ESTABLISHING TECHNICAL ASSISTANCE PROGRAMS FOR LASER SCHOOL DISTRICTS**

Within the LASER partnership, the role of the regional site leaders is to “build capacity” for improving science education with districts throughout the region. The NSRC envisioned that this role would include:

- site leaders expanding their existing regional efforts, work that pre-dates LASER, by involving new districts within their defined geographic areas
- site leaders assessing districts' readiness for reform, and inviting them to participate in the LASER Initiative
- site leaders working collaboratively with the NSRC staff to organize and host the LASER Phase I and II programs, described in Tables 2 and 3 of this report
- site leaders identifying participating districts' needs once a local leadership team attended a Strategic Planning Institute
- site leaders planning how to assist districts in implementing and sustaining effective science programs over time—either by providing technical assistance on the five elements of reform directly to the districts, or by serving as a “clearing house” for area expertise and resources available to support school districts' efforts

*Technical assistance on the five elements of reform means:*

- assisting client school districts in the selection, adoption, and piloting of inquiry-centered, K–8 curriculum programs that align with national, state, and local standards and frameworks

- providing professional development opportunities for teachers and administrators from client school districts as faculties begin to implement new curricula
- working with districts to establish cost-effective materials support systems
- helping districts identify appropriate means for assessing student progress in science learning
- developing strategies for building partnerships to sustain public and administrative support for K–8 science education reform<sup>2</sup>
- evaluating local LASER programs, as well as the progress districts are making

Since the start of LASER, regional leaders have initiated critical program activities and offered LASER events. They have involved 279 districts in a Developing a New Vision Conference, and 183 districts in a Regional Strategic Planning Institute.

Most site leaders from the regions that have held Strategic Planning Institutes recognize the need to be back in touch with participating districts to evaluate their progress and to assess their needs for further assistance. Some regional leaders have met with participating district teams or have surveyed their needs. A few work closely with a small set of districts and are aware of their work and the challenges they face.

Regional site leaders have taken a number of steps since the start of the LASER Initiative to plan, develop, and coordinate programs for providing ongoing technical assistance to districts working to improve their science education programs. These leaders have used a number of key strategies for developing regional technical assistance programs, including:

- working to influence state education policies and to leverage resources for science reform
- expanding partnership expertise
- increasing leadership capacity
- working with subregionally-organized consortia
- utilizing (pre-) existing organizations with subregional jurisdictions, and coordinating their existing work with the LASER project
- At this time there is evidence that the site leaders are building liaisons with a host of subregional service providers that can help support LASER and perhaps sustain that work.

Most of the technical assistance districts sought and received has focused primarily on three of the five elements of the school district reform model: curriculum, materials support, and professional development.

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<sup>2</sup> LASER proposal

- **Curriculum:**  
Regional site leaders and other service providers throughout the states have helped districts select, pilot, and adopt curriculum materials.
- **Materials Support:**  
At this time, regional site leaders report that one or more materials resource centers (MRCs) exist in all six LASER sites. They vary according to purpose, length of service, and jurisdiction. They provide materials to the entire region, subregions, consortia, and/or individual districts.
- **Professional Development:**  
At all six regions, partners' organizations and/or service providers offer a range of professional development options. Reported activities include institutes, workshops, meetings, and some onsite support for whole districts, teacher leaders, individual or school-based teams of classroom teachers, and administrators. Program content includes kit training, science content, and leadership development.

However, most site leaders report that their technical assistance programs remain relatively uncoordinated at this time.

## EVALUATING IMPACT

No LASER site has a *regionwide* system in place at this time for evaluating the progress of districts that have attended a LASER Institute or are involved in the LASER program in other ways. However in some subregional areas, LASER partners and/or regional technical assistance providers are evaluating district progress.

At this time, most regional site partners report that they do not have sufficient resources to carry out a district-level evaluation—lacking staff to collect and analyze data.

## RECOMMENDATIONS

The Regional LASER site partners offered a number of recommendations for enhancing the LASER program. Most are suggestions for additions to already existing Phase I and II events, or suggestions for new events to meet their regions' needs. In addition, sites continue to request an electronic communication system, and assistance with leveraging resources and evaluating district progress.